AFRICAN COLLEGE OF COMMERCE

P.O. BOX 301 KABALE – UGANDA

THE CURRICULUM FOR THE CERTIFICATE IN BRICKLAYING AND CONCRETE PRACTICE (CBCP)

THE STRUCTURE, REGULATIONS AND SYLLABUS

YEAR 2014

VISION

To be a leading Institution in Business, Technical and Vocational Training in Africa

MISSION

To establish a competence - based training that equips the learners with skills relevant to employment and economic growth

CORE VALUES

1. **Competence based training for competent and skilled graduates;**

2. **Integrity based on honesty and ethics;**

3. **Hard work, dedication, and achievement of results.**

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THE HISTORY OF

AFRICAN COLLEGE OF COMMERCE (ACC)

African College of Commerce is an Educational Institution majoring in Business Technical and Vocational training programmes. Below is the historical background of the institution.

1986: 14th April, Commissioned as a Business Education Institution.

1986: June, Registered and recognised by the Ministry of Education.

1990: Held the first Graduation Ceremony;

1992: Introduced Computer Science Courses;

1994: Granted Examinations Centre U62 by the Uganda National Examinations Board,

1998: Purchased land on which to construct the Main Campus

2003: Affiliated to Makerere University Business School (MUBS)

2004: Shifted from rented building in Kabale town centre to Kekubo cell a kilometre away in our own buildings in an area conducive for learning

2005: Received donation from the Federal Republic of Germany in form of buildings, computers, text books and Human Resource Development.

2006: Established ICT Centers in Kabale and Kanungu Districts with the assistance of the Uganda Communications Commission.

2007: Worn a BRONZE Medal from the Federation of Uganda Employers for being the third best employer in Uganda for the year 2006.

2008: Accredited by the National Council for Higher Education as a recognized Institution of Higher learning in Uganda:

2010: Re branding African College of Commerce. Introduced more Technical and Vocational programmes and short courses.

2011: April 16th 2011, Cerebrate Silver Jubilee **1986 to 2011**. Penetrated the Rwanda, Congo, Tanzania Burundi and Kenya

2012: Transformed into a fully fledged **Polytechnic.** Engaged all the training programmes into innovation and production units for products and services. Concretised the hands on training and competence based approach.

2014: Affiliating to Kyambogo University for diploma programmes and in particular the Diploma in Instructor and Technical Teacher Education DITTE, under Skilling Uganda Strategy.

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PART A GENERAL REGULATIONS

1.0 LIST OF ACRONYMS

CBCP	Certificate in Brick/block laying and Concrete Practice
CGPA	Cumulative
CH	Contact Hours
CU	Credit Units
GP	Grade Point
GPA	Grade Point Average
LH	Lecture Hours
NP	Normal Progress
PH	Practical Hours
PP	Probational Progress
ATP	Assessment Training Packages
ACC	African College of Commerce
ACCEB	African College of Commerce Examinations Board

2.0 TITLE

The title of the Programme is the **Certificate in Bricklaying & Concrete Practice**

3.0 INTRODUCTION.

The Certificate in Bricklaying & Concrete Practice is a two year academic programme aimed at providing students with Bricklaying and concrete practice knowledge and skills that are required in governmental and non-governmental establishments.

3.1 Rationale:

The building and Construction industry is growing rapidly in Uganda and East Africa at large. This require the skills of competently trained personnel in the fields of brick ad block laying and concrete practice. This programmes therefore intends to produce competent craftsmen and women to meet the growing demand in building and construction industry.

3.2 Target Group.

The target group is the Senior Four leavers and certificate holders in related fields from a reorganised institution.

5.0 PROGRAMME OUTCOMES

The graduate of Bricklaying and concrete practice will competently apply skills and knowledge of Bricklaying and concrete practice in laying bricks, interpreting plans among others.

4.0 OBJECTIVE OF THE PROGRAMME

The programme is intended to train and equip learners with basic knowledge and skills in Bricklaying and concrete practice.

6.0. JOB TITLES FOR CERTIFICATE IN BRICKLAYING AND CONCRETE PRACTICE GRADUATES

- Assistant Supervisor of Works
- Masonry Work
- Site Foreman
- Trades Foreman
- Assistant Contract Manager

7.0 ORGANIZATIONS THAT EMPLOY BCP GRADUATES

- District local Governments
- Central Governments and its Parastatals
- Established Contracting Companies like Roko, Arab, etc
- International organizations like UN, UNICEF
- Non Government Organizations
- Self Initiated companies

8.0. NATURE OF COURSES.

All the courses in this programme are compulsory.

9.0 ADMISSIONS AND ENTRY REQUIREMENTS

The minimum entry requirement to the Certificate in Brick Laying and Concrete Practice is:

a) Uganda Certificate of Education (UCE) with at least 3 passes in Science subjects;

b) Qualifications equivalent to Uganda Certificate of Education (UCE) as shall be determined by the National Council in consultation with the Uganda National Examinations Board;

10.0 DURATION OF THE PROGRAMME.

The minimum period to complete the Certificate in Bricklaying and Concrete practice Programme is two years and the maximum period is four years. If the student fails to complete the programme in the four years he/she shall be required to repeat the whole programme i.e. forfeit the already passed courses and start the programme a fresh.

11.0 MODE OF DELIVERY AND INSTRUCTIONAL STRATEGIES

The mode of delivery and instructional strategies shall be by the following:

11.1 Lectures for theory

11.2 Practical work in form of projects

11.3 Field work through industrial training and Study tours

12.0 STUDY MATERIALS AND INFRASTRUCTURE

12.1 Institutional Infrastructure

The institution will use the existing facilities on ACC Campus. The institution has sufficient infrastructure to facilitate the teaching and learning process e.g. furniture, lecture rooms, workshops, library, computer laboratories and a resource room.

12.2 Study Facilities

The Faculty of Engineering will use the existing study facilities on ACC Campus. The institution has sufficient study facilities to facilitate the teaching and learning process e.g. relevant materials and equipment to the programme, computers, handouts, textbooks and other materials from individual lecturers, journals and related publications, internet connectivity in the computer laboratories, library with wireless connection, audio visual materials, relevant software programme, source documents, archival records, government policy papers, Government Acts and Statutes, research and innovations by lecturers and students.

13.0 HUMAN RESOURCE

The Faculty of Engineering has well qualified and experienced teaching and technical staff managing the Certificate and Diploma Programmes. The academic and technical staff to support the Certificate in Bricklaying and Concrete Practice will be drawn from the programmes under the Faculty as listed on page 64 of this curriculum

14.0 PROGRAMME STRUCTURE

14.1 YEAR ONE SEMESTER ONE

Code	Name	LH	PH	CH	CU
CBCP 1101	Workshop Practice I	15	120	75	5
CBCP 1102	Theory and Drawing I	45	60	75	5
CBCP 1103	Mathematics I	40	40	60	4
CBCP 1104	Basic Communication Skills	40	40	60	4
CBCP 1105	Craft Science I	30	60	60	4
CBCP 1106	Computer Applications I	20	50	45	3
CBCP 1107	Bricklaying and Conc. Practice Project I	10	130	75	5
	Total	**200**	**500**	**450**	**30**

14.2 YEAR ONE SEMESTER TWO

Code	Name	LH	PH	CH	CU
CBCP 1201	Workshop Practice II	15	120	75	5
CBCP 1202	Theory And Drawing II	45	60	75	5
CBCP 1203	Craft Science II	30	60	60	4
CBCP 1204	Mathematics II	40	40	60	4
CBCP 1205	Computer Applications II	20	50	45	3
CBCP 1206	Bricklaying and Conc. Practice Project II	10	130	75	5
CBCP 1207	Fieldwork	10	130	75	5
	Total	**170**	**590**	**465**	**31**

14.3 YEAR TWO SEMESTER ONE

Code	Name	LH	PH	CH	CU
CBCP 2101	Workshop Practice III	15	120	75	5
CBCP 2102	Theory and drawing III	45	60	75	5
CBCP 2103	Applied Mathematics	40	40	60	4
CBCP 2104	Craft Science III	30	60	60	4
CBCP 2105	Engineering Software	20	50	45	3
CBCP 2106	Bricklaying and Conc. Practice Project III	10	130	75	5
	Total	**160**	**460**	**390**	**26**

14.4 YEAR TWO SEMESTER TWO

Code	Name	LH	PH	CH	CU
CBCP 2201	Workshop Practice IV	15	120	75	5
CBCP 2202	Theory and Drawing IV	45	60	75	5
CBCP 2203	Craft Science IV	30	60	60	4
CBCP 2204	Entrepreneurship Skills	50	20	60	4
CBCP 2205	Bricklaying and Conc. Practice Project IV	10	130	75	5
	Total	**150**	**390**	**345**	**23**

15.0 PROGRAMME LOAD

To qualify for the award of the Certificate in Bricklaying and Concrete Practice the candidate must obtain of 110 credit units distributed as follows:

YEAR ONE	SEMESTER I	30
	SEMESTER II	31
YEAR TWO	SEMESTER I	26
	SEMESTER II	23
	TOTAL	**110**

16.0 CURRICULUM

The curriculum for the Certificate in Bricklaying and Concrete Practice will be prepared by African College of Commerce and accredited by the National Council for Higher Education (NCHE).

17.0 EXAMINATION REGULATIONS

The examination rules and regulations for a Certificate in Bricklaying and concrete practice shall be set by African College of Commerce Examinations Board.

18.0 ADMISSIONS AND WITHDRAWALS FROM THE PROGRAMME

Admission into the programme will close at the end of the third full week of each semester;

19.0 PROGRESSION

Progression of a student will be classified as normal, probational or discontinued.

19.1 Normal progress

Normal progression occurs when a student passes each course taken with a minimum grade point of 2.0.

19.2 Probational progress

This is a warning stage and it occurs when a student;

(i) Fails a core/compulsory course
(ii) Has GPA or CGPA of less than 2.0

19.3 Stay Put

A student who fails more than a half of the number of courses in a semester will be required to stay on that semester until the failed courses are cleared. When the GPA of a student goes up in the following semester, the probation is removed.

19.4 Re-taking.

A student will retake any course when it is offered next, to pass or to improve performance. A student will retake in a course only two times.

19.5 Discontinuation

A student is discontinued when he or she has:

(i) Received three (3) consecutive probations on the same core or compulsory course.
(ii) Received a CGPA of less than 2.0 for three consecutive probations.
(iii) Failed to present sit for the final examinations without giving convincing reasons.
(iv) Over stayed on the programme for more than four years

20.0 FINAL EXAMINATION PAPER FORMAT

20.1 YEAR I SEMESTER I

PAPER NAME AND CODE	EXAMINATION FORMAT
CBCP 1102 Theory and Drawing I CBCP 1103 Mathematics I CBCP1104 Basic Communication Skills 1 CBCP 1105 Craft Science I	Each paper will consist of seven questions and the candidate shall be required to answer **at least five**. All questions will carry equal marks. The Students should be assessed on memory, understanding, application, analysis, synthesis and evaluation. The total duration of the examination will be three hours
BCP 1101 Workshop Practice I	This paper will consist of four questions and the candidate shall be required to answer them all. The total duration of the examination will be six hours
BCP 1106 Computer Applications 1	The paper will consist of three exercises and the will be required to answer all. The total duration of the examination will be two hours.
BCP 1107 Bricklaying and Concrete Practice Project I	This paper will consist of continuous assessment marks. African College of Commerce will always invite an external field practicing expert to verify the authenticity of the awarded marks from the completed projects on the ground and by making candidates participation through presentations of the projects completed in the respective semester. The duration of the examination will be during 15 weeks of teaching

20.2 YEAR I SEMESTER II

PAPER NAME AND CODE	EXAMINATION FORMAT
CBCP 1202 Theory and Drawing II CBCP 1203 Craft Science II CBCP 1204 Mathematics II	Each paper will consist of seven questions and the candidate will be required to answer **at least five**. All questions will carry equal marks. The Students should be assessed on memory, understanding, application, analysis, synthesis and evaluation. The duration of the examination will be three hours
CBCP 1105 Computer Applications 11	This paper will consist of section A (theory) and B (practical). Section Al consists of four questions carrying and a candidate will be required to answer at least two questions. Section B will consist of three practical questions and a candidate shall be required to answer at least two questions. The duration of the this theory and practical examination will be three hours
CBCP 1201 Workshop Practice II	This paper will consist of four questions and the candidate will be required to answer them all. The total duration of the examination will be six hours
CBCP 1206 Project Work II	This paper will consist of continuous assessment marks. African College of Commerce will always invite an external field practicing expert to verify the authenticity of the awarded marks from the completed projects on the ground and by making candidates participation through presentations of the projects completed in the respective semester The duration of the examination will be during 15 weeks of teaching.
CBCP 1207 Field work	Field work will take place in recess. An Assessment Supervision Sheet or Form shall be used to determine the practical performance of students at the training centres.

20.3 YEAR II SEMESTER I

PAPER NAME AND CODE	EXAMINATION FORMAT
CBCP 2102 Theory and drawing III CBCP 2103 Applied Mathematics III CBCP 2104Craft Science III	Each paper will consist of seven questions and the candidate will be required to answer **at least five**. All questions shall carry equal marks. The students should be assessed on memory, understanding, application, analysis, synthesis and evaluation. The total duration of the examination will be three hours
CBCP 2105 Engineering Software	This paper will consist of one practical section. It will consist of two practical questions and a candidate will be required to answer at least one questions. Section B will consist of three practical questions and a candidate will be required to answer at least two questions. The duration of the this practical examination shall be five hours
CBCP 2101 Workshop Practice III	This paper will consist of four questions and the candidate will be required to answer them all. The total duration of the examination will be six hours
CBCP 2106 Bricklaying and Concrete Practice Project III	This paper will consist of continuous assessment marks. African College of Commerce will always invite an external field practicing expert to verify the authenticity of the awarded marks from the completed projects on the ground and by making candidates participation through presentations of the projects completed in the respective semester. The duration of the examination will be during 15 weeks of teaching.

20.4 YEAR II SEMESTER II

PAPER NAME AND CODE	EXAMINATION FORMAT
BCP 2202 Theory and Drawing IV BCP 2203 Craft Science IV BCP 2203 Entrepreneurship Skills	Each paper will consist of **eight** questions and the candidate will be required to answer **at least five**. All questions will carry equal marks. The Students should be assessed on memory, understanding, application, analysis, synthesis and evaluation. The total duration of the examination will be three hours
BCP 2201 Workshop Practice IV	This paper will consist of four questions and the candidate will be required to answer them all. The duration of the examination will be six hours
BCP 2205 Brick laying and concrete Practice Project IV	This paper will consist of continuous assessment marks. African College of Commerce will always invite an external field practicing expert to verify the authenticity of the awarded marks from the completed projects on the ground and by making candidates participation through presentations

	of the projects completed in the respective semester The total duration of the examination will be during 15 weeks of teaching.

21 .0 ASSESSMENTS AND GRADING

21.1 Theory Assessment

21.1.1	Continuous Course Work	
	21.1.1.1 Course work 1	10%
	21.1.1.2 Course work 2	10%
	21.1.1.3 Course work 3	10%
	Total	**30%**
21.1.2	End of Semester Examination	**70%**
	Total	**100%**

21.2 Project Work

21.2.1	Project Assessment 1	20%
21.2.2	Project Assessment 2	20%
21.2.3	Student's Personal Innovation	20%
21.2.4	Project Assessment 4	40%
	Total	**100%**

21.3 Field Work

21.3.1	Industrial Training	70%
21.3.1	Field Tours	30%
	Total	**100%**

21.4 Assessment Training Packages (ATPs)

Each student will be assigned an Assessment Training Package. This will record the student's academic progression. This will include assessment areas, grades obtained from course works, project work, field work and final examination.

21.5 Grading courses

Each course unit will be graded out of a maximum of one hundred (100) marks and assigned grade point as follows

MARKS (%)	GRADE POINTS
80-100	5.00
75-79	4.50
70-74	4.00
65-69	3.50
60-64	3.00
55-59	2.50
50-54	2.00
Below 50	0.00

The course pass mark is 50% which is Grade Point 2.0.
No credit unit will be awarded for any course in which a student fails.

21.6 Scaling

All the grades will be scaled down to 100%

22.0 AWARDS AND CLASSIFICATION

22.1 Awards

A successful candidate will be awarded the Certificate in Bricklaying and concrete practice of African College of Commerce (ACC)

22.2 Grade Point Average (GPA)

A grade point average is mark calculated to determine the final award. To arrive at a grade point average, the following steps are taken.

a. Multiply the Grade Point by the Credit Unit to get a Weighted Score of a Course;
b. Add together the weighted scores for all courses taken up to that time to get **total weighted score(TW);**
c. Add the Credit Units for each course to get the **Total Credit Units (TCUs);**
d. Divide the total weighed scores by the total number of credit units taken up to that time to get **grade point average (GPA). TWs/TCUs =GPA.**

The letter grades shall be used for Grade Point Averages (GPAs) as follows:

A	B+	B	C	D
5	4	3	2	1

22.3 Cumulative Grade Point Average (CGPA)

This is determined by dividing total accumulated weighted scores (TWs) by the total accumulated credit units (TCUs) up to a particular time.

22.4 Classification of Final Awards

CLASS	FINAL CGPA	LETTER GRADE
First Class	4.4 – 5.0	A
Second Class Upper Division	4.0 – 4.3	B+
Second Class Lower Division	3.0 – 3.9	B
Pass	2.0 – 2.9	C
Fail	1 - 1.9	D

PART B: DETAILED COURSE CONTENT

23.0 YEAR I SEMESTER I

23.1 WORKSHOP PRACTICE I

COURSE CODE: **CBCP 1101**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

COURSE DESCRIPTION:
This course introduces students to the practical skills in using tools and their care, materials, brick and block laying and setting out

LEARNING OUTCOMES
The student should be able to attains skills in brickwork, and display the mastery of using hand tools

OBJECTIVES:
By the end of this course the student should be able to;
1. Specify and use the different tools
2. Tell the mixing precautions of mortar

CAPTER ONE
1.0 Tools
1.1 Use of tools
1.2 Care of tools to be used during the course
1.3 Introducing line, level, square and gauge rod

COURSE CONTENT

CHAPTER TWO
2.0 Materials
2.1 Mixing, handling and application of mortar
2.2 Use of plasticizers and spot boards,
2.3 Preparation of moulding, cement and sand bricks also clinker blocks,
2.4 Use of brick and block making machines plus curing.

CHAPTER THREE
3.0 Bricklaying
3.1 Half brick walls in stretcher bond, half brick walls with one brick piers.
3.2 English and Flemish bond in one brick wall,
3.3 Stopped ends square corners tooling and raking back.
3.4 Isolated piers and attached piers up to two bricks thick.
3.5 Openings with square jambs flush and weather pointing. Use of damp proof courses.

CHAPTER FOUR
4.0 Block laying:
4.1 Using hollow and solid blocks of standard sizes.

4.2 Stopped ends, square corners, piers and openings.
4.3 Oblique angles.
4.4 Use of damp proof courses, raking out, pointing block work as work proceeds and after completion.

CHAPTER FOUR
5.0 Setting out
5.1 Setting out small building on a level site; using a builders square and profile
5.2 Levelling trenches for foundations
5.3 Levelling concrete and use of boning rods
5.4 Use of 3, 4, 5, methods of setting out, use of trammel and template method of setting out circular building.

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. R. S. Rhodes: Basic Engineering Drawing
5. Francis K. Ching: Architectural Graphics
6. Obande: Construction Technology
7. Eric Isanga: Advanced Level Technical Drawing

23.2 THEORY AND DRAWING I

COURSE CODE: **CBCP 1102**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

COURSE DESCRIPTION:
This course introduces students to the safety and welfare, tools, materials, drawing instruments, bonding and concrete.

LEARNING OUTCOMES
The students should be able to attains skills of using tools and equipments and interprets drawings

OBJECTIVES:
By the end of this course, the learner should be able to:
1. Differentiate between tools and equipments
2. Classify and use building materials
3. Apply the rules of bonding
4. Mix, batch concrete

COURSE CONTENT

CHAPTER ONE
1.0 SAFETY, HEALTH AND WELFARE
1.1 Causes of accidents on site.
1.2.1 Effects of accidents.
1.3 Prevention of accidents.

CHAPTER TWO
2.0 TOOLS AND EQUIPMENTS
2.1 Types and classification of tools.
2.2 Care and maintenance of tools and equipments
2.3 Use of tools.

CHAPTER THREE
2.0 MATERIALS
3.1 Clay bricks, types, characteristics and manufacturing process.
3.2 Purpose made bricks, cement sand bricks curing.
3.3 Cement sand blocks, hollow blocks, and breezed blocks,
3.4 Aggregates, fine and course aggregates types and tests, uses and storage.
3.5 Cement and lime, manufacture, types use and storage, setting time.
3.6 Mortar, types, methods of mixing, mixing ratio or proportions, use.
3.7 Use of plasticizers in mortar, storage of materials on site.
3.8 Transportation of material.

CHAPTER FOUR
4.0 SELECTION, CARE AND USE OF DRAWING INSTRUMENTS
4.1 Use of rulers and use of set squares, protractors, compasses, pencils, drawing board. Scale rules.
4.2 Sizes of paper, paper setting, and lettering.

4.3 Drawing of plain figures, rectangle, triangle and circles.

CHAPTER FIVE
4.0 BONDING
4.1 Rules of bonding types
4.2 Bonding types
4.3 Special Bondings

CHAPTER SIX
6.0 CONCRETE
6.1 Mixing and placing of concrete.
6.2 Proportions of ingredients.
6.3 Batching
6.4 Segregation
6.5 Curing.
6.6 Reinforced concrete

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. R. S. Rhodes: Basic Engineering Drawing
5. Francis K. Ching: Architectural Graphics
6. Obande: Construction Technology
7. Eric Isanga: Advanced Level Technical Drawing

23.3 MATHEMATICS I

COURSE CODE: **CBCP 1103**

CREDIT UNIT: **04**

CONTACT HOURS: **60 HOURS**

COURSE DESCRIPTION:
This course unit introduces students to arithmetic, the number systems equations mensuration, indices and logarithm and trigonometry.

LEARNING OUTCOMES
The student should be able to solves all mathematical problems in carpentry

OBJECTIVES
By the end of this course, students should be able to:
1. Calculate area and volume of regular and irregular objects
2. Transpose a formula
3. Solve equations
4. Apply trigonometrical ratios
5. Appreciate the importance of Pythagoras theorem and its application

COURSE CONTENT

CHAPTER ONE
1.0 Arithmetic
1.1 Decimals
1.2 Fractions
1.3 Squares
1.4 Percentages
1.5 Ratios
1.6 Proportions & square roots

CHAPTER TWO
2.0 Number systems
2.1 Decimal
2.3 Binary
2.4 Octal
2.5 Hexadecimal
2.6 Standard forms & surds

CHAPTER THREE
3.0 Metric system
3.1 SI System
3.2 Area of triangle other than a right angle
3.3 Area of parallelogram, trapezium, circle
3.4 Circumference of circle

CHAPTER FOUR
4.0 Use of formula
4.1 The theory of Pythagoras
4.2 Area of right angled triangle

4.3 Length of Arc

CHAPTER FIVE
5.0 Equations
5.1 Solution of linear equations
5.2 Quadratic equations
5.3 Simultaneous equations (simple)
5.4 Transposition of formula & evaluation

CHAPTER SIX
6.0 Mensuration
6.1 Areas
6.2 Volumes
6.3 Perimeters

CHAPTER SEVEN
7.0 Indices & Logarithms
7.1 Laws of indices
7.2 Rules of logarithms
7.3 Change of base
7.4 Fractional and negative indices
7.5 Multiplication and division
7.6 Rationalisation
7.7 Equations involving indices

CHAPTER EIGHT
8.0 Trignometrical ratios
8.1 Sine,
8.2 Cosine,
8.3 Tangent
8.4 Trignometrical reciprocals
8.5 Cosecant
8.6 Secant
8.7 Cotangent

CHAPTER NINE
9.0 Graphics of Equations
9.1 Introduction to Cartesian coordinate system
9.2 Drawing the graph of a linear equation using ordered pairs
9.3 Determination of gradients/slope of a straight line
9.4 Equation of a straight line, $y = mx + c$ e.g .Y =2x + 3
9.5 Curve sketching of a graph of any equation e.g. $y = x^2$. The gradient of a Curved graph [approximate Method]

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Mathematics for Technicians by Taylor Level II
2. Pure mathematics back house I

23.4 BASIC COMMUNICATION SKILLS

COURSE CODE **CBCP 1104**

CREDIT UNITS **04**

CONTACT HOURS **60 HOURS**

COURSE DESCRIPTION
This course introduces students to the basics of communication especially the desirable skills that help students in the world of work. Letter writing skills are also covered in detail.

LEARNING OUTCOMES
By the end of this course, students should be able to communicate effectively to teammates and the public.

OBJECTIVES OF THE COURSE
By the end of this course the student should be able to:
1. Demonstrate the ability to communicate efficiently and effectively
2. Deal with correspondences and other writings at a supervisory level
3. Understand the meaning of communication and how it relates to other management functions.
4. Use of both verbal and non-verbal communication
5. Acquire public presentation skills
6. Acquire writing skills of business letters, memos and minutes of a meeting.

COURSE CONTENT

CHAPTER ONE
1.0. Grammar and vocabulary
1.1. Parts of speech
1.2. Tenses
1.3. Simple and Compound Sentences
1.4. Punctuation
1.5. Direct and Indirect Speech
1.6. Prefixes and suffixes
1.7. Correction of grammatical errors

CHAPTER TWO
2.0 Comprehension
2.1 Summary writing
2.2 Written and oral deduction of summons from given prose passage
2.3 Diction
2.4 Answering questions about the passage

CHAPTER THREE
3.0 Introduction
3.1 Meaning of communication
3.2 The communication process and its elements
3.3 Importance of communication
3.4 Types of communication; oral, verbal and non-verbal etc.
3.5 Barriers to communication

3.6 Remedies to barriers of communication
3.7 Principles of business communication

CHAPTER FOUR
4.0 Organizational communication
4.1 Introduction
4.2 Communication structures
4.3 Communication networks
4.4 Channels of communication
4.4.1 Downward channels
4.4.2 Upward channels
4.4.3 Horizontal communication
4.4.4 Grape vine communication
4.4.5 Diagonal communication

CHAPTER FIVE
5.0 Written communication
5.1 Introduction
5.2 Advantages and disadvantages of written communication
5.3 Business letter writing; CV writing, Application letter writing, requisition writing, apology writing, memo writing, delegation letters, official circulars, recommendation letters and notices
5.3.1 Parts of the business letter, types/formats of letters

CHAPTER SIX
6.0 Report writing
6.1 Definition of a report
6.2 Importance of reports
6.3 Types of reports
6.4 Limitations of reports in organizations and solutions

CHAPTER SEVEN
7.0 Oral communication
7.1 Introduction
7.2 Advantages and disadvantages of oral communication
7.3 Listening
7.3.1 Meaning of listening
7.3.2 Listening process
7.3.3 Types of listening
7.3.4 Preparation for listening
7.3.5 Importance of listening
7.3.6 Listening skills
7.3.7 Barriers to effective listening
7.4 Public speaking
7.4.1 Types of public speaking
7.4.2 Preparation/principles
7.4.3 Stage flight
7.5 Negotiating
7.6 Telephones
7.6.1 How to use a telephone
7.6.2 Advantages and disadvantages of telephones

CHAPTER EIGHT

8.0 Non-verbal communication

8.1 Meaning of non verbal communication
8.2 Relationship between verbal and non verbal communication
8.3 Importance of non verbal communication
8.4 Divisions of non verbal communication
8.4.1 Social
8.4.2 Physical (gestures, facial, expression, eyes etc)
8.4.3 Environment; room design, Buildings etc
8.5 Problems of non verbal communication and their suggested solutions

CHAPTER NINE

9.0 **Meetings**
9.1 Meaning of meetings
9.2 Types of meetings
9.3 Preparation for meetings
9.4 Documents and terminologies used in meetings.
9.5 Notices, Agenda, minutes etc
9.6 Roles of different personnel
9.7 Advantages and disadvantages of meetings
9.8 Committees
9.9 Formation and types of committees
9.10 Advantages and disadvantages of committees
9.11 Handling committee business

CHAPTER TEN

10.0 Interviews

10.1 Definition of interviews
10.2.1 Parties involved in the interview
10.2.2 Roles of different parties involved in the interview
10.3 Methods or types of interviews

CHAPTER ELEVEN

11.0 Practical participation

11.1 Use of aids in:-
11.1.1 Oral presentation
11.1.2 Meetings
11.1.3 Interviews and committee sittings

CHAPTER TWELVE

12.0 Advertising

12.1 Definition of advertising
12.2 How to design an advert
12.3 Modes of advertising (radio, newspapers, magazines, internet, signposts etc.)

MODE OF DELIVERY

The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%

Total **100%**

The marks will be converted into Grade points.

There will be the final examination in the last two weeks of the semester.

REFERENCES

1. G J.BWaswaBalumywa, Getting the message around
2. J.S. Chandan Management, concepts and strategies
3. Chester L. Wolford and Vanneman E. (1983) Business Communications Edward Arnold, London
4. Little P. (1996) Communication in business Pitman Publishing, London
5. Mable Komunda, Business Communication skills

23.5 CRAFT SCIENCE I

COURSE CODE: **BCP 1105**

CREDIT UNIT: **04**

CONTACT HOURS: **60**

COURSE DESCRIPTION:
This course introduces students to the mortar, properties of materials and concrete.

LEARNING OUT COMES
By the end of this course, students should be able to attain basic knowledge in mixing mortar, concrete and has knowledge on the properties of materials.

OBJECTIVES:
By the end of this course, students should be able to:
1. Demonstrate skills in using mortar
2. Identify the physical and chemical properties of materials
3. Carry out concrete tests

COURSE OUTLINES

CHAPTER ONE
1.0 Mortar:
1.1 Preparation of mortar, mixes,
1.2 uses of plasticizers, effects,
1.3 Special cements rapid hardening and quick setting cement.

CHAPTER TWO
2.0 Properties of materials
2.1 Physical properties; mass, density, volume porosity, specific gravity, voids and pores.
2.2 Bulking, drying of wet materials
2.3 Principle of Archimedes.

CHAPTER THREE
3.0 Concrete
3.1 Properties of concrete,
3.2 Aggregates, functions of aggregates, grading, bulk and mixing,
3.3 Tests.

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.

There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. R. S. Rhodes: Basic Engineering Drawing
5. Obande: Construction Technology
6. Eric Isanga: Advanced Level Technical Drawing
7. Sarendrah Singh: Material Science

23. 6 COMPUTER APPLICATIONS I

Course code **CBCP 1106**

Credit units **03**

Contact hours **45**

COURSE DESCRIPTION
The course introduces students to the computer applications through practical skills in information technology software to enable them compete favorably in the dynamic technology-based world.

LEARNING OUTCOMES
By the end of this course, Students should l be able to use the common Microsoft Office applications of word processing, spreadsheets, graphics, presentations and databases.

OBJECTIVES
By the end of this course learners should be able to:

1. Identify the different Applications within an Office environment
2. Acquire skills in basic computer software applications and apply them in various business situations in order to facilitate the information management function.
3. Appreciate computer applications in business through hands on
4. Demonstrate the ability to use the common software applications of Microsoft Word, and Microsoft Excel
5. Produce business documents and data analysis and models applicable to business environment

COURSE CONTENT

CHAPTER ONE
1.1 Basic concepts and startup procedures
1.2 Introduction to practical computing
1.3 Connecting computer parts (CPU, Monitor, Mouse, Key board)
1.3 Windows Operating Systems Commands
1.4 Booting the computer
1.5 Using the mouse
1.6 Managing the user interface
1.7 Introduction to Windows programmes

CHAPER TWO
2.0 Word Processing (Document production with MS word)
2.1 Starting Ms Word
2.2 Creating documents
2.3 Looking at and using tool bars
2.4 Entering data
2.5 texts formatting
2.6 page formatting
2.7 Document formatting
2.8 Creating tables
2.9 Sorting and filtering data (plain text and tabulated text)

2.10 Graphics
2.11 printing
2.12 practice assignments

CHAPTER THREE

3.0 Spreadsheets (Microsoft Excel)

3.1 Starting Ms Excel
3.2 Excel tool bars
3.4 Managing workbooks and worksheets
3.5 Entering data and its formatting
3.6 Performing formulae, errors and their corrections
3.7 Calculating using functions
3.8 Sorting and filtering data
3.9 Using Graphs
3.10 Printing
3.11 Practice assignments

MODE OF DELIVERY

The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Kathy Ivens and Thomas Barich(1997), How to use Microsoft Office' 97, Ziff-Davis press
2. Whitecomb A and Brown B, Key boarding and Document production, Stanley Thornes, **Chem.: emam**
3. E.S. Waburoko(200), An introduction to information technology, Department to Distance Learning, Edsoft Computer Institute
4. Teach yourself Microsoft Excel 97 in 24 Hours by Linda Jones and Reul L. Hernadez by S: MS
5. Hernandez cy SAW Publishing
6. Keneth C. and Laudon J.P: Essentials of Management Information Systems; 3rd Edition Prentice Hall, New Jersey, 1999
7. Elliot G. and Starkings:Business Information Technology, Theory and Practice; Addison Wesley, Longman, London and New York, 1998
8. Olive and Chapman; Data Processing and Information Technology, DP Publications
9. Christopher Barnatt (1996): Management Strategy; ND Information Technology; International Thomson Business Press.
10. Clifton H.D. and A.G. (1994); Business Information Systems; 5th Edition.
11. Raymond McLeod J (1995): Management Information Systems; 6th Edition; Prentice Hall International Editions.

23.7 BRICK LAYING AND CONCRETE PRACTICE PROJECTS ONE

COURSE CODE: **CBCP 1107**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

PROJECT DESCRIPTION:
This course introduces students to the practical skills in using tools to perform a real life project

PROJECT OUTCOMES
The students should be able to perform practical real life project in construction.

OBJECTIVES OF THE PROJECT
By the end of this course the student should be able to;
1. Set out and construct a house
2. Make bricks of different sizes and shapes

PROJECT ACTIVITIES
1. Preparation of moulding, cement and sand bricks/blocks using of brick and block making machines
2. Building Half brick walls, one brick walls/piers
3. Building English and Flemish bond in one brick wall
4. Setting out a small building on a level site

MODE OF DELIVERY
The mode of delivery will include; demonstration, hands on, group discussions, project work and presentation

ASSESSMENT OF THE COURSE
This course unit will be assessed on 100 marks as follows:

Project Assessment 1	20%
Project Assessment 2	20%
Student's Personal Innovation	20%
Project Assessment 4	40%
Total	**100%**

The marks will be converted into Grade points.

24.0 YEAR I SEMESTER II

24.1 WORKSHOP PRACTICE II

COURSE CODE:	**CBCP 1201**
CREDIT UNIT:	**05**
CONTACT HOURS:	**75**

COURSE DESCRIPTION:
This course introduces students to the practical skills in cement preparation, handling and the use of mortars.

LEARNING OUTCOMES
The student should be able to prepare materials for construction especially mixing concrete materials.

OBECTIVES
By the end of the course, learners should be able
1. Prepare concrete
2. Cast slabs
3. Plaster and render
4. Demonstrate skills in formwork and all other forms of shuttering

COURSE OUTLINES

CHAPTER ONE
1.0 Concrete
1.1 Preparation of materials, proportions,
1.2 Method of mixing; by hand and machine.
1.3 Handling and placing,
1.4 Curing use and care of machines.

CHAPTER TWO
2.0 Casting small slabs e.g. pavings
2.1 Casting and fixing sand and cement ridges and hip copings, fixing flashings and forming fillets.

CHAPTER THREE
1.0 Plastering, rendering and tiling
3.1 Mixing mortal for plastering,
3.2 preparations and preparing to walls, internal and external, and ceiling.
3.3 Use of plasticizers,
3.4 Fixing wall and floor tiles, laying and fixing special floor and wall finishes.

CHAPTER FOUR
2.0 Shuttering;
4.1 Practice in assembly of metal and timber forms and supports.

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. R. S. Rhodes: Basic Engineering Drawing
5. Francis K. Ching: Architectural Graphics
6. Obande: Construction Technology
7. Eric Isanga: Advanced Level Technical Drawing

24.2 THEORY AND DRAWING II

COURSE CODE: **CBCP 1201**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

COURSE DESCRIPTION:
This course introduces students the geometrical constructions of circles, ellipses. It also covers bonding solutions and setting out foundations and walls.

LEARNING OUTCOMES
The student should be able to attain knowledge in geometrical construction of ellipses and circle and their applications in building and construction especially in arches and the setting of walls

OBJECTIVES
By the end of the course the learner should be able to;
1. Draw circles and ellipses
2. Set out foundations
3. Set out walls

COURSE OUTLINES

CHAPTER ONE
1.0 Geometrical Constructions
1.1 Geometrical drawing involving circles and ellipses use of scale rules and Scales in common use.

CHAPTER TWO
2.0 Bonding solution
2.1 Bonding solution for different types of bonds, decorative bonds, jambs, reveals, junctions and squint corners.

CHAPTER THREE
3.0 Setting out of a building
3.1 Method of setting a building.
3.2 Erection of profiles.
3.3 Excavation and timbering to shallow trenches.
3.4 Methods of timbering and levelling the trench.

CHAPTER FOUR
4.0 Foundation
4.1 Types of foundation: - Raft, strip, pad, pile, and stepped foundations.
4.2 Standard method of establishing the width and depth of a foundation form the thickness of a wall.
4.3 Regulation and requirements of a good foundation, plinth wall and footings, types of soils.
4.4 Damp prevention in buildings.
4.5 Use of D.P.Cs, weathering to sills and thresholds, anti- proof courses, mixes and positions of A.P.Cs.

CHAPTER FIVE

5.0 Walls

5.1 Types of walls: fender walls, sleeper walls, honey comb walls, gable walls, retaining walls, boundary walls.

5.2 Parapet walls, composite walls stone walling: - Uncoursed and coursed random rubbles.

5.3 Mortar for masonry walls and pointing.

5.4 Foundation and classification of local stones.

5.5 Representation of simple solids in isometric projection.

MODE OF DELIVERY

The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.

There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. R. S. Rhodes: Basic Engineering Drawing
5. Francis K. Ching: Architectural Graphics
6. Obande: Construction Technology
7. Eric Isanga: Advanced Level Technical Drawing

24.3 CRAFT SCIENCE II

COURSE CODE: **CBCP 1203**

CREDIT UNIT: **04**

CONTACT HOURS: **60**

COURSE DESCRIPTION:
This course introduces students the moisture movement due to capillarity, efflorescence and concrete.

LEARNING OUTCOMES
The student attains knowledge on the related science in moisture content, cement and efflorescence.

OBJECTIVES
By the end of the course the learner should be able to:
1. Determine the moisture content
2. Describe efflorescence
3. Describe cement and its processes

COURSE OUTLINES

CHAPTER ONE
3.0 Moisture movement through walls due to capillarity;
1.1 Absorption of water,
1.2 porosity,
1.3 Permeability,
1.4 Capillary action,
1.5 Damp proof course,
1.6 Cohesion and adhesion,
1.7 Drying,
1.8 Shrinkage
1.9 Moisture content.
1.10 Capillary checks in threshold, cills heads and copings.

CHAPTER TWO
4.0 Efflorescence
2.1 Causes and treatment of efflorescence,
2.2 Elementary consideration of problems caused by condensation.
2.3 Cement: -
2.4 Composition,
2.5 Properties, manufacturing process,
2.6 Wet and dry process,
2.7 Types, and tests, experiment on concrete mixes.
2.8 Functions of reinforcement in simple concrete beams, concrete covers and curing.

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. Obande: Construction Technology
5. Sarendrah Singh: Material Science

24.4 MATHEMATICS II

COURSE CODE: **CBCP 1204**

CREDIT UNIT: **04**

CONTACT HOURS: **60**

COURSE DESCRIPTION:
This course introduces students to solve mathematical related problems in the field.

LEARNING OUTCOMES
The student should be able to attain basic knowledge in equations and matrices and probability

OBJECTIVES
By the end of this course the learner should be able to:
1. Apply different methods of solving equations using matrices
2. Apply factorization in solving equations
3. Appreciate the importance of Pascal's Triangle
4. Apply statistics and probability in daily life

COURSE CONTENT

CHAPTER ONE
1.**0** **Matrices**
1.1 Addition, subtraction and multiplication of
1.2 Matrices, determination of a 2 x 2 and 3 x3
1.3 Matrix, transpose and cofactors of matrices,
1.4 Inverse matrices by adjoint method.

CHAPTER TWO
1.0 Vectors
2.1 Introduction to vector representation
2.2 Types of vectors
2.3 Addition and subtraction of vectors

CHAPTER THREE
3.0 Permutations and combinations;
3.1 The factorial notation, Pascal's triangle,
3.2 General binomial expansion of $(1+X)^n$
3.3 Sequences & series
3.4 Polynomials
3.5 Multiplication and division of algebraic expression
3.5 Factorization of polynomials with linear factors

CHAPTER FOUR
4.0 Cutting lists for materials
4.1 Nominal and finished sizes and allowances for cutting and waste
4.2 Cost of materials

CHAPTER FIVE

5.0 Statistics
5.1 Discrete and continuous data;
5.2 Frequency and histograms
5.3 Central tendency-mean mode and
5.4 Medium. Dispersion –variance and standard deviation.

MODE OF DELIVERY

The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Mathematics for Technicians by Taylor Level II
2. Pure mathematics back house I

24.5 COMPUTER APPLICATIONS II

Course code **CBCP 1205**

Credit units **03**

Contact hours **45**

COURSE DESCRIPTION
The course introduces students to the computer applications through practical skills in information technology software to enable them compete favorably in the dynamic technology-based world.

LEARNING OUTCOMES
By the end of this course, Students should l be able to use the common Microsoft Office applications of word processing, spreadsheets, graphics, presentations and databases.

OBJECTIVES
By the end of this course learners should be able to:
1. Identify the different Applications within an Office environment
2. Acquire skills in basic computer software applications and apply them in various business situations in order to facilitate the information management function.
3. Appreciate computer applications in business through hands on
4. Demonstrate the ability to use the common software applications of Microsoft Word, and Microsoft Excel
5. Produce business documents and data analysis and models applicable to business environment

COURSE CONTENT

CHAPTER ONE
1.0 Database Management (Microsoft Access)
1.1 Starting MS Access
1.2 Creating data bases
1.3 Crating data tables; Using design view, table wizard, by entering data
1.4 Creating relationships between tables
1.5 Creating forms; using form wizard
1.6 Creating queries; using design view, using query wizard
1.7 Sorting and filtering data
1.8 Formatting data in different objects
1.9 Generating reports using report wizard
1.10 printing
1.11 Practice assignments

CHAPTER TWO
2.0 Presentation management (Microsoft point)
2.1 Starting MS Power Point
2.2 Starting a slide presentation and selecting the slides of desire
2.3 Formatting slides in the slide sorter
2.4 Adding coloring to slides
2.5 Graphing in the slides

2.6 Formatting slide show for different slide designs, layouts and animation schemes
2.7 Viewing a slide show
2.8 Saving and printing the slide presentation
2.9 Practice assignments

CHAPTER THREE

3.0 Internet/Intranet

3.1 Internet definition
3.2 History of Internet
3.3 Uses of Internet
3.4 ISP (Internet Service Providers)
3.5 DNS (Domain Name Systems)
3.6 www (World Wide Web)
3.7 Internet Browsers and Search Engines; Google Chrome, Internet Explorer, Mozira Firefox, OPERA
3.8 URL (Uniform Resource Locator)
3.9 Web Portals
3.10 Navigator/Bookmarks/links
3.11 Uploading and Downloading
3.12 Webmail (Electronic Mails); Thunderbird, Outlook.
3.13 Working with news groups
3.14 Printing and Saving Documents
3.15 Social Networking Web: Facebook, Twiter, Google, Yahoo messenger (chart room),
3.16 http: (hypertext Transfer Protocal)
3.16 Creating a homepage
3.17 Internet Security; Virus Infection, Firewalls, Open source programmes (Thunderbird, Outlook Google Chrome, Internet Explorer, Mozira Firefox, OPERA)

MODE OF DELIVERY

The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Kathy Ivens and Thomas Barich(1997), How to use Microsoft Office' 97, Ziff-Davis press
2. Whitecomb A and Brown B, Key boarding and Document production, Stanley Thornes, **Chem.: emam**
3. E.S. Waburoko(200), An introduction to information technology, Department to Distance Learning, Edsoft Computer Institute
4. Teach yourself Microsoft Excel 97 in 24 Hours by Linda Jones and Reul L. Hernadez by S: MS

24.6 BRICK LAYING AND CONCRETE PRACTICE PROJECTS II

COURSE CODE: **CBCP 1206**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

PROJECT DESCRIPTION
This course introduces students to the practical skills in cement preparation, handling and the use of mortars in accomplishing a real life project.

PROJECT OUTCOMES
The student should perform a real life project in casting concrete and the making of formwork.

OBJECTIVES OF THE PROJECT
By the end of the course, learners should be able
1. Prepare concrete, cast slabs, plaster and render
2. Make bricks
3. Demonstrate skills in formwork and all other forms of shuttering

PROJECT ACTIVITIES
1. Concrete Preparation of cement and mortar, Casting small slabs, Plastering, rendering and tiling
2. Shuttering

Core project for Year one, semester one
Moulding Bricks and Blocks

Project purpose
At the end of this project students shall be able to mould bricks and blocks, which meet the requirement of the local market.
The moulding of bricks and blocks, involve the selection, safe and correct use, maintenance and storage of tools, equipments and materials, and the selection and use of the correct methods and procedures.

1. Mould common bricks of (215x102x65); Related practical exercises
   i) Excavation of soil or clay
   ii) Weathering of soil or clay
   iii) Moulding of clay into bricks
   iv) Drying and stacking bricks

Burning bricks in a clamp

MODE OF DELIVERY

The mode of delivery will include; demonstration, hands on, group discussions, project work and presentation

ASSESSMENT OF THE COURSE
This course unit will be assessed on 100 marks as follows:

Project Assessment 1	20%
Project Assessment 2	20%
Student's Personal Innovation	20%
Project Assessment 4	40%
Total	**100%**

The marks will be converted into Grade points.

24.7 FIELD WORK

Course code CBCP 1207

Credit units 05

Contact hours 75

FIELD WORK DESCRIPTION
This course introduces students to practical application of skills and concepts learnt during the time of training at the institution.

OBJECTIVES
By the end of this course, students should be able to:
1. Fit in work place environment
2. Translate the theory learnt in class into real life situation
3. Acquire more job competences
4. Market themselves to prospective employers by demonstrating practical skills related to their programmes of study.

INDUSTRIAL TRAINING CONTENT
1. Intern orientation at the work place
2. Prepare a work plan for industrial training
3. Prepare daily schedule of the performed activities
4. Record achievements and challenges
5. Make recommendations
6. Write a report

MODE OF TRAINING
The mode of training will be as follows:
1.1 Working under the guidance of the Industrial supervisor
2.0 Supervise the Intern on the set tasks
3.0 Conferencing by the college supervisor with the intern

ASSESSMENT OF THE INDUSTRIAL TRAINING

Training institution supervisor	10%
Workplace supervisor's assessment	30%
Intern's report	30%
Total	**70%**

STUDY TOURS CONTENT
Identify areas within the academic content that need study tour
1. Identify the appropriate areas for the study tours
2. Make a study tour proposal by the staff facilitator
3. Conduct the study tour
4. Prepare reports: the staff facilitator and the individual students

ASSESSMENT OF THE STUDY TOURS

Report by the student	20%
Student's conduct and participation	10%
Study Tours	**30%**
Grand Total for field study	**100%**

25.0 YEAR II SEMESTER I

25.1 WORKSHOP PRACTICE III

COURSE CODE: **CBCP 2101**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESCRIPTION:
This course introduces students to the practical skills in scaffolding, lintels and reinforced concrete

LEARNING OBJECTIVES
The student should be able to attain basic knowledge in all types of scaffolding and the use of reinforced concrete

OBJECTIVES:
By the end of the course, learners should be able:
1. Erect scaffolds
2. Cut holes in concrete
3. Demonstrate skills in using reinforced concrete

COURSE CONTENT

CHAPTER ONE
1.0 **Scaffolding**: - Erecting tubular and other scaffolding in accordance with recognised building regulations,
1.1 Hoisting.

CHAPTER TWO
2 **Cutting holes** and chases in concrete and block work
2.1 Fixing and building in wood and metal doors and windows;
2.2 Pre-cast units, pre-cast lintels, sills, canopies etc…

CHAPTER THREE
3 Reinforced Concrete
3.1 Fixing reinforcing rods and mesh in correct position with suitable cover and placing concrete to simply designed floor, beams, pillars and walls.
3.2 Construction and hollow block, floors, preparation for finishes

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. Francis K. Ching: Architectural Graphics
5. Obande: Construction Technology
6. Sarendrah Singh: Material Science

25.2 THEORY AND DRAWING III

COURSE CODE: **CBCP 2102**

CREDIT UNIT: **5**

CONTACT HOURS: **75**

COURSE DESCRIPTION:
This course introduces students to scaffolding, formwork, doors and window opening, floors and finishes. It also includes orthographic projections of solids.

LEARNING OUTCOMES
The student should be to attain knowledge in scaffolding and all other types of formwork and should ably apply finishes.

OBJECTIVES:
By the end of the course, learners should be able:
1. Describe scaffolding
2. Demonstrate skills in formwork construction
3. Construct to a stopped end
4. Apply finishes
5. Use drawing to represent solids

COURSE CONTENT

CHAPTER ONE
1.0 SCAFFOLDING: -
1.1 Timber and steel scaffolds method of erection,
1.2 Safety precautions and regulation, fitting.
1.3 Other types of scaffoldings

CHAPTER TWO
2.0 FORMWORK
2.1 Formwork for lintels, beams columns and suspended floors.
2.2 Materials used for construction of formwork, regulations and functional requirements.

CHAPTER THREE
3.0 DOOR AND WINDOW OPENING
3.1 Types of doors.
3.2 Fixing of doors and windows frames.

CHAPTER FOUR
4.0 CIRCULAR WORK:
4.1 Circular work in brick and block, simple arch.
4.2 Construction of semi – circular, segmental up to 1.8m span;
4.3 Axed and rough ringed arches and soldier arches,
4.3 Centres and turning pieces.

CHAPTER FIVE
5.0 REPRESENTATION OF SOLIDS
5.1 Representation of solids by orthographic projection,

5.2 Construction of arches; segmental, semi-circular, three centred, Tudor arch and gothic arches
5.3 Drawing of cross and vertical sections of formwork for lintels, beams and columns to scale.

CHAPTER SIX
6.0 WALL FINISHES
6.1 Rendering and plastering
6.2 Types of rendering and plastering of external and internal walls.

CHAPTER SEVEN
7.0 FLOORS:
7.1 Construction of suspended of hollow ground floors, ventilations, solid floors.
7.2 Types of floor finishes: Tiling and standard sizes and methods of laying.

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. R. S. Rhodes: Basic Engineering Drawing
5. Francis K. Ching: Architectural Graphics
6. Obande: Construction Technology
7. Eric Isanga: Advanced Level Technical Drawing

25.3 APPLIED MATHEMATICS

COURSE CODE: **CBCP 2103**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESCRIPTION:
This course introduces students to the use of tables, cost of materials and labour, volumes and areas.

LEARNING OUTCOMES
The student should be able to attain the basic knowledge in ratios trigonometry, areas and volumes

OBJECTIVES:
By the end of the course, learners should be able:
1. Use tables to solve logarithms, trigonometrical ratios and other related applications.
2. Prepare the cutting lists of materials
3. Calculate areas and volumes

COURSE CONTENT

CHAPTER ONE:
1.1 Use of four figured tables

CHAPTER TWO
2.1 Cost of labour and materials

CHAPTER THREE
3.1 Areas and volumes of irregular figures
3.2 Surface areas of common solids

CHAPTER FOUR
4.1 Formulae
4.2 Substitution,
4.3 Evaluation and transposition,
4.4 Conversion of metric and British measurements.

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES
1. K.A. Stroud: Engineering Mathematics

25.4 CRAFT SCIENCE III

COURSE CODE: **CBCP 2104**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESCRIPTION:
This course introduces students to the thermo movement, lime, corrosion and stress

LEARNING OUTCOMES
The student should be able to attain knowledge in thermo movements, their effects and the relationship between stress and strain

OBJECTIVES:
By the end of the course, learners should be able:
1. Describe thermo movements
2. Explain the effect of stress and strain

COURSE CONTENT

CHAPTER ONE
1.0 Thermo movement
1.1 Simple explanation of thermal movement,
1.2 Problems caused by thermal movement remedies

CHAPTER TWO
2.0 Lime
2.1 Heating of lime (calcinations) quick lime,
2.2 Slaking of lime,
2.3 Chemical action,
2.4 Hardening of lime, types and use.

CHAPTER THREE
3.0 Corrosion
3.1 Corrosion of metals,
3.2 Types causes and prevention.

CHAPTER FOUR
4.0 Stress and strain,
4.1 Elementary consideration on simple beam need for limiting deflexion.
4.2 Testing of small beams for deflexion and breaking.

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. Francis K. Ching: Architectural Graphics
5. Obande: Construction Technology
6. Sarendrah Singh: Material Science

25.5 ENGINEERING SOFT WARE

COURSE CODE	**CBCP 2105**
CREDIT UNITS	03
CONTACT HOURS	45

COURSE DESCRIPTION
This course introduces students the design of building structures using the computer programmes of Auto and Arch CAD.

LEARNING OUTCOMES
By the end of the course, students will be able to use a computer for designing and drawing building structures and facilities.

OBJECTIVES OF THE COURSE
By the end of this course, students should be able to;
1. Use a computer for designing and drawing building structures and facilities
2. Use AutoCAD and Archi CAD in designing buildings, road sections and other facilities

CHAPTER ONE
1.0 File Management
1.1 Create new files, save a file, Open a file,
1.2 Export, Publish, Recover
1.3 Send, Publish

CHAPTER TWO
2.0 Drawing
2.1 Creation of layers
2.2 Line ray, construction line, multi line
2.3 Polyline, 3D polyline, polygon, Rectangle
2.4 Arch Circle Donut, Ellipse, Spline
2.5 Block, Point
2.6 Hatch, Boundary, Region, Cloud

CHAPTER THREE
3.0 Methods for Viewing Drawing
3.1 Regenerate
3.2 Redraw
3.3 Zoom
3.4 Pan
3.4 Hide, Shade and Render
3.5 Dimension

CHAPTER FOUR
4.0 Dimensioning
4.1 Linear, Aligned, Ordinate
4.2 Radius Diameter Angular
4.3 Baseline, Text, Dimension styles

CHAPTER FIVE

5.0 Modifying a Drawing

5.1 Match Properties, Object, Clip
5.2 Erase, Copy, Offset, Array
5.3 Move Rotate, Scale, Stretch, and Lengthen
5.4 Trim, Extend, Break, Chamfer, Fillet
5.5 3D Operation, Solid Edit,
5.6 Explode

CHAPTER SIX

6.0 Production of Architectural Drawing

6.1 Review of drawing layout: Title block, Notes, Paper sizes,
6.2 Considerations of site orientation, economy, aesthetics, facilities for disabled, fire safety,
6.3 Block plan, Site Plan, Ground plan
6.4 Sections and Elevations
6.5 Details
6.6 Plotting and printing drawing on plain sheets, tracing and ammonia paper

CHAPTER SEVEN

7.0 Facilities details

7.1 Production of Plumbing & drainage drawings details
7.2 Electrical wiring network to lights and circuits

MODE OF DELIVERY

The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Narayan, K. Lalit (2008). *Computer Aided Design and Manufacturing*. New Delhi: Prentice Hall of India. p. 3. ISBN 812033342X.
2. Narayan, K. Lalit (2008). *Computer Aided Design and Manufacturing*. New Delhi: Prentice Hall of India. p. 4. ISBN 812033342X.
3. Madsen, David A. (2012). *Engineering Drawing & Design*. Clifton Park, NY: Delmar. p. 10. ISBN 1111309574.
4. Farin, Gerald; Hoschek, Josef and Kim, Myung-Soo (2002). *Handbook of computer aided geometric design [electronic resource]*. Elsevier. ISBN 978-0-444-51104-1.
5. Ross, Douglas T. (17 March 1961). Computer-Aided Design: A Statement of Objectives. MIT USAF 8436-TM-4.

25.5 BRICK LAYING AND CONCRETE PRACTICE PROJECTS III

COURSE CODE: **CBCP 2105**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

PROJECT DESCRIPTION
This course introduces students the practical skills in scaffolding, lintels and reinforced concrete in accomplishing a real life project.

PROJECT OUTCOMES
The student should be able to perform a real life project in scaffolding and brick work with re enforcements

OBJECTIVES OF THE PROJECT
By the end of the course, learners should be able:
1. Erect scaffolds in brickwork
2. Demonstrate skills in working with reinforced concrete

PROJECT ACTIVITIES
1. Erecting tubular scaffolds
2. Pre-cast units, pre-cast lintels, sills, canopies
3. Construction and hollow block, floors, preparation for finishes

MODE OF DELIVERY

The mode of delivery will include; demonstration, hands-on, group discussions and presentation

ASSESSMENT OF THE COURSE
This course unit shall be assessed out of 100 marks as follows:

Project Assessment 1	20%
Project Assessment 2	20%
Student's Personal Innovation	20%
Project Assessment 4	40%
Total	**100%**

The marks will be converted into Grade points.

26.0 YEAR II SEMESTER II

26.1 WORKSHOP PRACTICE IV

COURSE CODE: **CBCP 2201**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

COURSE DESCRIPTION:
This course introduces students to the practical skills in masonry work and all drainage

LEARNING OUTCOMES
By the end of this course, students should be able to construct slabs, copying and parapet walls, set out for simple drainage and install septic tanks.

OBJECTIVES:
By the end of the course, learners should be able:
1. Construct slabs, coping and parapet walls
2. Set out for simple drainage
3. Install septic tank

COURSE CONTENT

CHAPTER ONE
1.0 Masonry
1.1 Random stone and granite walling,
1.2 Facing old new buildings with local stone and granite
1.3 Fixing pre-cast stone and marble facing slabs
1.4 Casting and fixing copings to parapet walls

CHAPTER TWO
2.0 Drainage
2.1 Setting out a simple system of drainage, gullies and traps,
2.2 Construction of inspection chamber,
2.3 Rendering and benching to interior,
2.4 Installation of septic tank and soak away pit;
2.5 Installation of square pans, WCs, Pans brackets for suits and basins, connection to drainage system.

Core project for year two
CONSTRUCT AND FINISH FLOORS

PROJECT PURPOSE
At the end of this project students shall be able to construct different types of floors and to apply different finishes to the floors. Students shall be able to demonstrate the selection, safe and correct use of tools, equipment, materials and the selection, application of the correct methods and procedures.

1. Construct a solid floor for a small house and finish it off with cement sand screed and cement grout

i) Place hard core
ii) Proportion materials for concrete.
iii) Mix concrete
iv) Cast and cure concrete
v) Prepare concrete surface
vi) Make mortar
vii) Fix battens and at convenient intervals
viii) Lay screed and finish off with cement
ix) Apply cement grout

MODE OF DELIVERY

The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. R. S. Rhodes: Basic Engineering Drawing
5. Obande: Construction Technology

26.2 THEORY AND DRAWING IV

COURSE CODE: **CBCP 2202**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

COURSE DESCRIPTION:
This course introduces students to the stairs, drawing to scale, fire place and chimneys

LEARNING OUTCOMES
The student should be to attain basic knowledge in design of stairs, chimneys and their eventual construction

OBJECTIVES:
By the end of the course, learners should be able:
1. Design stairs and construct them
2. Draw stairs and walls to scale
3. Construct chimneys and fire places

COURSE CONTENT

CHAPTER ONE
1.0 STAIRS
1.1 Pre-cast concrete stairs,
1.2 Terminologies,
1.3 Regulations,
1.4 Functional requirements
1.5 Formwork for stairs.

CHAPTER TWO
2.0 DRAWING TO SCALE
2.1 Drawing to scale of floors, stair and walls

CHAPTER THREE
4 FIRE PLACE AND CHIMNEYS
4.1 Types of fire place
4.2 Drainage construction
4.3 Drawing to scale vertical and cross – section through fire places

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. Obande: Construction Technology

26.3 CRAFT SCIENCE IV

COURSE CODE: **CBCP 2203**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESCRIPTION:
This course introduces students to the heat, use of levers and stability of walls

LEARNING OUTCOMES
The student attains knowledge in heat and the design of levers

OBJECTIVES:
By the end of the course, learners should be able:
1. Describe heat conduction, and calculate heat suitable for buildings
2. Design, make and use levers
3. Make design that are suitable for the stability of walls

COURSE CONTENT

CHAPTER ONE
1.0 Heat
1.1 Conduction
1.2 Convention and radiation
1.3 Prevention of heat in buildings
1.4 Simple calculation of heat

CHAPTER TWO
2.0 Use of levers, wedges and pulleys in moving of weights and in simple building process

CHAPTER THREE
3.0 Stability of walls,
3.1 Factors affecting walls and piers;
3.2 Axial and eccentric loading columns and struts.

MODE OF DELIVERY
The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE
This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.
There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Roy Chudley: Building Construction Handbook, 4th edition
2. R. Barry: Building Construction
3. W.G Nash: Brickwork 1, 2 and 3
4. R. S. Rhodes: Basic Engineering Drawing
5. Obande: Construction Technology

26.4 ENTREPRENEURSHIP SKILLS

COURSE CODE: **CBCP 2204**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESCRIPTION:
This course introduces students to the basics of innovation and starting up a business

LEARNING OUTCOME
The student should be able to attains knowledge and skills of starting a business

OBJECTIVES

By the end of the course, learners should be able:
By the end of this course, the learner should be able to;
1. Identify business opportunities
2. Generate new ideas for starting up a business
3. Develop a business plan

COURSE CONTENT

CHAPTER ONE
1.0 Introduction
1.1 Introduction to entrepreneurship
1.2 Basic concepts to Entrepreneurship
1.3 Importance of Entrepreneurship education
1.3 Characteristics and qualities of a good entrepreneur
1.4 Classification of entrepreneurs
1.5 The entrepreneurial process

CHAPTER TWO
2.0 Creativity
2.0 Definition of creativity
2.3 Steps of creativity
2.4 Challenges facing entrepreneurs
2.5 Solutions of barriers to entrepreneurship

CHAPTER THREE
3.0 Innovation
3.1 Definition of innovation
3.2 Attributes of a good innovator

CHAPTER FOUR
4.0 Business planning and development
4.1 Sources of business opportunities
4.2 Sources of Capital for a Business
4.3 Small scale businesses Vs Entrepreneur ventures
4.4 Business plan

CHAPTER FIVE

5.0 Entrepreneurship

5.1 Definition

5.2 Importance of Entrepreneurship

5.3 How to develop an organization that supports Entrepreneurship

CHAPTER SIX

6.0 **Concept development**

6.1 Forms of Business start up

6.2 Practically developing an enterprise

6.3 Life after start-up

MODE OF DELIVERY

The mode of delivery will include: lecture, hands-on, demonstration, group discussions and presentation.

ASSESSMENT OF THE COURSE

This course unit will be assessed out of 100 marks as follows;

Course work by continuous assessment	30%
Final examination	70%
Total	**100%**

The marks will be converted into Grade points.

There will be the final examination in the last two weeks of the semester.

REFERENCES

1. Drucker, F.P 1985 innovation and entrepreneurship. Sultan Chand and sons, New Delphi
2. Gupta, CB 1995 Entrepreneurship Development 3rd edition. Sultan Chand and sons, New Delphi
3. Apegu, J.N 2005. How to create a sustainable Business. Longman, London
4. Gupta, C.B. and Srimivasan, N.P. (1996) Entrepreneurial development. Sultan, Chard and Sons Publishers
5. Kao, John; (1989) Entrepreneurship, creativity and organizations. Prentice Hall International
6. Clifford Pinchott III 1985; Intrapreneuring, Harper and Row Publishers, New York
7. Khandwalla N. Pradip 1995, Four the Eye; Excellence Through Creativiy. Wheeler Publishing

26.5 BRICK LAYING AND CONCRETE PRACTICE PROJECTS IV

COURSE CODE: **CBCP 2205**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

PROJECT DESCRIPTION:
This course introduces students to the practical skills in masonry work and all drainage

PROJECT OUTCOMES
The student should be able to attain performs a real life project in special constructions such as floors, slabs and finishes

OBJECTIVES OF PROJECT
By the end of the course, learners should be able:
1. Construct slabs, coping and parapet walls
2. Design, set out and construct drainage
3. Construct and finish floors

PROJECT ACTIVITIES
1. Fixing pre-cast stone and marble facing slabs, Casting and fixing copings to parapet walls
2. Setting out a simple system of drainage, Construction of inspection chamber, and Installation of septic tank and soak away pit

Core project for year two
CONSTRUCT AND FINISH FLOORS

PROJECT PURPOSE
By the end of this project students should be able to construct different types of floors and to apply different finishes to the floors. Students shall be able to demonstrate the selection, safe and correct use of tools, equipment, materials and the selection, application of the correct methods and procedures.

Construct a solid floor for a small house and finish it off with cement sand screed and cement grout
1. Place hard core
2. Proportion materials for concrete.
3. Mix concrete
4. Cast and cure concrete
5. Prepare concrete surface
6. Make mortar
7. Fix battens and at convenient intervals
8. Lay screed and finish off with cement
9. Apply cement grout

MODE OF DELIVERY
The mode of delivery will include; demonstration, group discussions, project work and presentation

ASSESSMENT OF THE PROJECT

This course unit will be assessed on 100 marks as follows:

Project Assessment 1	20%
Project Assessment 2	20%
Student's Personal Innovation	20%
Project Assessment 4	40%
Total	**100%**

The marks will be converted into Grade points.

27.0 LIST OF LECTURERS AND TECHNICAL STAFF IN THE FACULTY OF ENGINEERING AND TECHNOLOGY

S/N	NAME	QUALIFICATIONS	EXPERIENCE
1	Akankwasa Phionah	B.VOC.STUD. IN TECH. EDUC (KYU)	3 Years
2	Byamukama Denis	B.VOC.STUD. IN TECH. EDUC (KYU)	3 Years
3	Ingabire Charity	B.VOC.STUD. IN TECH. EDUC (KYU)	3 Years
4	Mwanja Grace Charles	B.Sc Engineering (MUK)	28 Years
5	Kinconco Keneth Muhumuza	ODEE (UNEB), Bsc. Educ. KYU	8 Years
6	Twine Usito Bakesigaki	B. Tech. Teacher Educ. (Mech), KYU	3 Years
7	Nyanzi baker	ODEE (UBTEB) (UTC)	2 Years
8	Twinomujuni Naume	DWE, UNEB (UTC)	3 Years
9	Mugerwa Ashirafu	ODME, UBTEB (UTC)	2 Years
10	Muhumuza Merable	ODCE, UNEB (UTC)	3 Years
11	Niwagaba Edwin	ODIP CERAMICS (UNEB)	2 Years
12	Nabasa Philip	CRAFT I & II, CERT. IN PLUMB (UNEB), DWE	4 Years
13	Mbabazi Alex	ODEE (UNEB) CRAFT I & II ELECT INST (UNEB)	9 Years
14	Tugume Vicent	Craft I & II Carpent & Joinery UNEB, CTTE KYU, DCE Kabale Univ	13 Years
15	Arinda Sam	DME UNEB, HDEE City Guilds of London Institutes	4 Years
16	Niwamanya Paison	ODME (UNEB)	2 Years
17	Narinda Ivan	B.Voc Studies in Tech Educ KYU	2 Years
18	Akampurira Keneth	HDME, ODME (UNEB), B. Sc in Computer Science MUK	17 Years
19	Ashaba Nickolas	ODWE (UNEB)	3 Years
20	Wanjori Paul	B.Sc Electrical Engineering (MUK)	3 Years