AFRICAN COLLEGE OF COMMERCE

P.O. BOX 301 KABALE – UGANDA

THE CURRICULUM FOR
THE CERTIFICATE IN
CARPENTRY AND JOINERY (CCJ)

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**. Started receiving clients from 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

ACC	African college of commerce
ACCAB	African College of Commerce Academic Board
CCJ	certificate in carpentry and joinery
CGPA	Cumulative Grade Point Average
CH	Contact Hours
CU	Credit Units
GP	Grade Point
GPA	Grade Point Average
HNDC	Higher National Diploma in Construction
IT	Industrial Training
LH	Lecture Hours
NCHE	National Council for Higher Education
NP	Normal Progress
PH	Practical Hours
PP	Probationary Progress

2.0 TITLE

The title of the Programme is the CERTIFICATE IN CARPENTRY AND JOINERY

3.0 INTRODUCTION.

The **Certificate in Carpentry and Joinery** is a two year academic programme aimed at providing students' carpentry and joinery skills that are required in wood work industry.

3.1 Rationale:

There is increased demand for modern furniture that has necessitated skilled labour to meet this need. The **Certificate in Carpentry and Joinery** is aimed at imparting basic knowledge and skills to fulfill this need.

3.2 Target Group.

The target group is the Senior Four leavers and Uganda Junior Technical certificate holders in related fields.

4.0 OBJECTIVE OF THE PROGRAMME

The programme is intended to train and equip learners with knowledge and skills in wood work

5.0 PROGRAMME OUTCOMES

The graduate of this program shall apply acquired basic skills to produce quality and modern furniture and standard roofing

6.0. JOB TITLES FOR CCJ GRADUATES

- Assistant supervisor of works
- Carpenters
- Site foreman
- Trades foreman
- Assistant contract manager

7.0 ORGANIZATIONS THAT EMPLOY CCJ GRADUATE

- District local governments
- Churches
- Schools and institutions
- Established contracting companies like Roko, Arab, etc
- International organizations like UN, UNICEF
- Non Government Organizations
- Community based organisations
- Self Initiated companies
- Central governments and its parastatals

8.0. NATURE OF COURSES

All the courses in this programme are compulsory.

9.0 ADMISSION REQUIREMENTS

The minimum entry requirement to the Certificate in Carpentry and Joinery is:
The minimum entry requirement to the Certificate in Plumbing 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 Carpentry and Joinery is two years and the maximum period is four years. Failure to complete the program in four/two years, the student shall be required to repeat the whole program i.e. forfeit the already passed program and start afresh.

11.0 MODE OF DELIVERY AND INSTRUCTIONAL STRATEGIES

The mode of delivery and instructional strategies will 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
11.4 Class discussions and group presentations
11.5 Demonstrations

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 Carpentry and Joinery will be drawn from the programmes under the Faculty as listed on page 65 of this curriculum

14.0 PROGRAMME STRUCTURE

14.1 YEAR ONE SEMESTER ONE

Code	Name	LH	PH	CH	CU
CCJ 1101	Workshop Practice I	15	120	75	5
CCJ 1102	Craft Theory and Science I	30	60	60	4
CCJ 1103	Mathematics I	40	40	60	4
CCJ 1104	Geometry I	30	30	45	3
CCJ 1105	Computer Applications I	20	50	45	3
CCJ 1106	Basic Communication Skills	40	40	60	4
CCJ 1107	Carpentry and Joinery Project I	10	130	75	5
	Total	**185**	**470**	**420**	**28**

14.2 YEAR ONE SEMESTER TWO

Code	Name	LH	PH	CH	CU
CCJ 1201	Workshop Practice II	15	120	75	5
CCJ 1202	Craft Theory and Science II	30	60	60	4
CCJ 1203	Geometry II	30	30	45	3
CCJ 1204	Mathematics II	40	40	60	4
CCJ 1205	Computer Applications II	20	50	45	3
CCJ 1206	Carpentry and Joinery Project II	10	130	75	5
CCJ 1207	Fieldwork	10	130	75	5
	Total	**155**	**560**	**435**	**29**

14.3 YEAR TWO SEMESTER ONE

Code	Name	LH	PH	CH	CU
CCJ 2101	Workshop Practice III	15	120	75	5
CCJ 2102	Craft Theory and Science III	30	60	60	4
CCJ 2103	Geometry III	30	30	45	3
CCJ 2104	Engineering Software	20	50	45	3
CCJ 2105	Carpentry and Joinery Project III	10	130	75	5
	Total	**105**	**390**	**300**	**20**

14.4 YEAR TWO SEMESTER TWO

Code	Name	LH	PH	CH	CU
CCJ 2201	Workshop Practice IV	15	120	75	5
CCJ 2202	Craft Theory and Science IV	30	60	60	4
CCJ 2203	Geometry IV	30	30	45	3
CCJ 2204	Entrepreneurship Skills	50	20	60	4
CCJ 2205	Carpentry and Joinery Project IV	10	130	75	5
	Total	**135**	**360**	**315**	**21**

15.0 PROGRAMME LOAD

To qualify for the award of **Certificate in Carpentry and Joinery** candidate must obtain 98 credit units distributed as follows:

YEAR ONE	SEMESTER I	28
	SEMESTER II	29
YEAR TWO	SEMESTER I	20
	SEMESTER II	21
	TOTAL	**98**

16.0 CURRICULUM

The curriculum for Certificate in Carpentry and Joinery shall be prepared by African College of Commerce Academic Board and accredited by National Council for Higher Education (NCHE).

17.0 EXAMINATION REGULATIONS

The examination rules and regulations for a Certificate in Carpentry and Joinery will be set by African College of Commerce Academic Board (ACCAB)

18.0 ADMISSIONS TO 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 Retaking or discontinuation.

19.1 Normal progression

Normal progression occurs when a student passes each course taken with a minimum grade point of 2.00

19.2 Probationary progress

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

(i) Fails a course unit
(ii) Has GPA or CGPA of less than 2.00

19.3 Stay put

A student who fails more than a half of the total 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 Retaking

A student will retake any course when it is next offered, to pass or to improve performance. A student shall 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 in the same course unit.
(ii) Received a CGPA of less than 2.00 for three consecutive probations.
(iii) Failed to present him/her-self for final examinations without giving sufficient reasons.
(iv) Over stayed on the programme for a period of more than four years

20.0 FINAL EXAMINATION PAPER FORMAT

20.1 YEAR ONE SEMESTER ONE

PAPER NAME AND CODE	EXAMINATION FORMAT
CCJ 1102 Craft Theory and Science I CCJ 1103 Mathematics I CCJ 1104 Geometry CCJ 1106 Basic Comm. Skills	Each paper will consist of seven questions and the candidate will be required to answer **at least five**. All questions 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
CCJ 1101 Workshop Practice I	This paper consists of four questions and the candidate will be required to answer them all. The duration of the examination will be six hours
CCJ 1105 Computer Applications I	The course unit will consist of four questions and a candidate shall be required to answer all questions. The duration of the paper will be three hours.
CCJ 1107 Carpentry and Joinery Project I	Continuous assessment of the various projects in the semester will lead to the final examination paper marks. The duration of the assessment will be within the 15 weeks of teaching. African College of Commerce will invite an external expert/examiner to assess the projects.

20.2 YEAR ONE SEMESTER TWO

PAPER NAME AND CODE	EXAMINATION FORMAT
CCJ 1202 Craft Theory and Science II CCJ 1203 Geometry II CCJ 1204 Mathematics II	Each paper will consist of seven questions and the candidate will be required to answer **at least five**. All questions will l 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.
CCJ 1205 Computer Applications II	The course unit will consist of four questions and a candidate shall be required to answer all questions. The duration of the paper will be three hours.
CCJ 1201 Workshop Practice II	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
CCJ 1206 Carpentry and Joinery Project Work II CCJ 1207 Fieldwork	Continuous assessment of the various projects in the semester will lead to the final examination paper marks. The duration of the assessment will be within the 15 weeks of teaching. African College of Commerce will invite an external expert/examiner to assess the projects.

20.3 YEAR TWO SEMESTER ONE

PAPER NAME AND CODE	EXAMINATION FORMAT
CCJ 2102 Craft Theory and Science III CCJ 2103 Geometry	This paper will consist of seven questions and the candidate will be required to answer **at least five**. All questions 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
CCJ 2104 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
CCJ 2101 Workshop Practice III	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
CCJ 2106 Carpentry and Joinery Project Work III	Continuous assessment of the various projects in the semester will lead to the final examination paper marks. The duration of the assessment will be within the 15 weeks of teaching. African College of Commerce invites an external expert/examiner to assess the projects.

20.4 YEAR TWO SEMESTER TWO

PAPER NAME AND CODE	EXAMINATION FORMAT
CCJ 2202 Craft Theory and Science IV CCJ 2203 Geometry IV CCJ 2204 Entrepreneurship Skills	This paper will consist of seven questions and the candidate will be required to answer **at least five**. All questions 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
CCJ 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
CCJ 2205 Project Work IV	Continuous assessment of the various projects in the semester will lead to the final examination paper marks. The duration of the assessment will be within the 15 weeks of teaching. African College of Commerce will invite an external expert/examiner to assess the projects.

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 Carpentry and Joinery 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 ONE SEMESTER ONE:

23.1 WORKSHOP PRACTICE I

COURSE CODE: **CCJ 1101**

CREDIT UNIT: **5**

CONTACT HOURS: **75**

COURSE DESRIPTION:
This course introduces students to hands on training in all the areas taught theoretically.

LEARNING OUTCOMES
By the end of the course, the students should be able to perform using hands on the work place.

OBJECTIVES OF THE COURSE
1. Demonstrate skill of using hand tools in felling conversion and other forms of carpentry
2. Perform tasks in joinery

COURSE CONTENT

CHAPTER ONE
1.0 Hand tools
1.2 Application of hand tools, safety, uses and maintenance

CHAPTER TWO
2.0 Portable power tools
2.1 Methods of cutting
2.2 Marking and cutting of different joints

CHAPTER THREE
3.0 Timber
3.1 Identification of hard and soft woods
3.2 Preparation of felling
3.3 Methods of felling
3.4 Methods of conversion
3.5 Methods of seasoning
3.6 Methods of application of preservatives

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. R. S Rhodes & L.B. Cook; Basic Engineering Drawing
2. Eric Isanga; Technical Drawing, Advanced level
3. Peter Bret Carpentry and Joinery, Level 1,2
4. Wood working , Motivate series 1, 2
5. Frank Hilton; Carpentry and joinery
6. Peter Bret; Carpentry and Joinery for craft building

23.2 COURSE NAME: CRAFT THEORY AND SCIENCE I

COURSE CODE: **CCJ 1102**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESRIPTION:
This course introduces students to the hand tools, portable tools, joints and timber,. Classify timber- seasoning defects and apply preservatives to timber.

LEARNING OUTCOMES
Students should be able to use hand tools, portable tools, make joints working with timber to produce finished products such benches and chairs.

OBJECTIVES OF THE COURSE
By the end of this course, the students should be able to:
1. Classify hand tools
2. Differentiate between hand tools and portable tools
3. Make joints of different types
4. Classify timber- seasoning, conversion, defects
5. Apply preservatives to timber

COURSE CONTENT

CHAPTER ONE
1.0 Hand and Power tools
1.1 Safety
1.2 Classification
1.3 Uses
1.4 Maintenance

CHAPTER TWO
2.0 Portable Power tools
2.1 Safety
2.2 Types/classification
2.3 Function/Uses
2.4 Maintenance
2.5 Advantages and Disadvantages relative to hand tools.

CHAPTER THREE
3.0 Joints
3.1 Classification
3.2 Lengthening
3.3 Widening
3.4 Angle/Oblique

CHAPTER FOUR
4.0 Timber
4.1 Structures of hard woods and soft wood
4.2 Felling, Conversion and seasoning
4.3 Defects: natural and artificial

4.4 Preservation
4.5 Timber
4.6 Simple comparison of the structure of hardwoods and softwoods.

CHAPTER FIVE
5.0 Seasoning
5.I Introduction to the principles involved in the seasoning of timber.
5.2 Factors affecting the rate of evaporation of moisture.
5.3 Change of shape of timber due to loss of absorption of moisture.
5.4 Porosity.
5.5 Capillarity.
5.6 Anti-capillary grooves.
5.7 Demarcation of moisture content by calculation.

CHAPTER SIX
6.0 Nails and Screws
6.1 Holding power of nails and screws in various woods and under different conditions.
6.2 Withdraw tests.
6.3 Lateral loading.

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. R. S Rhodes & L.B. Cook; Basic Engineering Drawing
2. Eric Isanga; Technical Drawing, Advanced level
3. Peter Bret Carpentry and Joinery, Level 1,2
4. Wood working , Motivate series 1, 2
5. Frank Hilton; Carpentry and joinery
6. Peter Bret; Carpentry and Joinery for craft building

23.3 MATHEMATICS I

COURSE CODE: **CCJ 1103**

CREDIT UNIT: **3**

CONTACT HOURS: **45**

COURSE DESRIPTION:
This course introduces students to the basics of mathematics- arithmetic, number systems, equations, trigonometry and graphs

LEARNING OUTCOMES
Students should be able to appreciate the significance of mathematics in carpentry work and the use of formula to solve a lot of carpentry problems.

OBJECTIVES OF THE COURSE
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. 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

CHAPTER FOUR
4.0 Use of formula
4.1 The theory of Pythagoras
4.2 Area of right angled triangle
4.3 Area of triangle other than a right angle
4.4 Area of parallelogram, trapezium, circle
4.5 Circumference of circle
4.6 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

7.1 Indices & Logarithms

7.2 Laws of indices
7.3 Rules of logarithms
7.4 Change of base
7.5 Fractional and negative indices
7.6 Multiplication and division
7.7 Rationalization
7.8 Equations involving indices

CHAPTER EIGHT

8.0 Trigonometry

8.1 Sine,
8.2 Cosine,
8.3 Tangent
8.4 Cosecant
8.5 Secant
8.6 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. $y = x^2$ and their gradients

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 GEOMETRY I

COURSE CODE: **CCJ 1104**

CREDIT UNIT: **3**

CONTACT HOURS: **45**

COURSE DESRIPTION:
This course introduces students to the basics of technical drawing- simple geometric constructions, lay out and scale drawings.

LEARNING OUTCOME
Students should be able to produce the working drawing and make simple geometrical drawings.

OBJECTIVES OF THE COURSE
By the end of this course the learner should be able to
1. Identify Types of lines used in drawing.
2. Know various scales such as 1:1, 1:2, 1:5, 1:10, 1:20, 1:50, 1:100.
3. Know bisectors and perpendiculars, angles by bisection
4. Construction of polygons by various methods. Pentagon, hexagon, heptagon, octagon, decagon, unidecagon, duodecagon.

COURSE CONTENT

CHAPTER ONE
1.0 Preparation and lettering of drawings
1.1 Layout of drawing paper.
1.2 Types of pencils used in drawings.
1.3 Types of lines used in drawing.
1.4 Types of lettering used in drawings.
1.5 Emphasis on neatness.

CHAPTER TWO
2.0 Scale and Scale Drawing
2.1 Introduction to scale rule.
2.2 Drawing lines.
2.3 Various scales such as 1:1, 1:2, 1:5, 1:10, 1:20, 1:50, 1:100.
2.4 Division of lines.
2.5 Emphasis of accuracy and neatness.

CHAPTER THREE
3.0 Plane Geometry
3.1 Bisectors and perpendiculars, angles by bisection.
3.1.1 Construction of perpendiculars.
3.1.2 Construction of angles by bisection.
3.2 Triangles.
3.2.1 Construction of various triangles by protractor and compasses.
3.2.2 Emphasis on accuracy.
3.3 Regular Polygon.

3.3.1 Construction of polygons by various methods. Pentagon, hexagon, heptagon, octagon, decagon, unidecagon, duodecagon.
3.4 The circle.
3.4.1 The circle: its parts and its practical application.
3.4.2 Tangents and Normals.
3.4.3 Tangents and Normals to circles
3.4.4 Inscribed and Circumscribed Figures.
3.4.5 Inscribed and circumscribed figures in circles, squares, polygons and triangles.
3.5 The Ellipse.
3.5.1 Construction of ellipse by practical and geometrical methods, tangents and normals (true and approximate ellipse)

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. R. S Rhodes & L.B. Cook; Basic Engineering Drawing
2. Eric Isanga; Technical Drawing, Advanced level
3. Peter Bret Carpentry and Joinery, Level 1,2
4. Wood working , Motivate series 1, 2
5. Frank Hilton; Carpentry and joinery
6. Peter Bret; Carpentry and Joinery for craft building

23.5 COMPUTER APPLICATIONS I

Course code **CCJ 1105**

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.

23.6 BASIC COMMUNICATION SKILLS

COURSE CODE	**CCJ 1106**
CREDIT UNITS	**4**
CONTACT HOURS	**60**

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

1.0 Comprehension
1.1 Summary writing
1.2 Written and oral deduction of summons from given prose passage
1.3 Diction
1.4 Answering questions about the passage

CHAPTER ONE

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 TWO
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 THREE
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 FOUR
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 FIVE
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 SIX

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 SEVEN

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 EIGHT

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 NINE

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 TEN

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

23.7 CARPENTRY AND JOINERY PROJECT I

COURSE CODE: **CCJ 1107**

CREDIT UNIT: **5**

CONTACT HOURS: **75**

PROJECT DESRIPTION:
This course introduces students to hands on training in accomplishing a real life project

PROJECT OUTCOMES
By the end of the course, the students should be able to work on a real life project and present results.

OBJECTIVE OF THE PROJECT
1. Fell, Convert a log and make different types of furniture using hand tools

PROJECT ACTIVITIES
1. Timber
2. Identify soft woods
3. Fell the tree
4. Convert the log
5. Season the timber
6. Apply preservatives

MODE OF DELIVERY
This mode of delivery will be through hands on, illustrations, site visits, guided discussion, practical work, innovation, presentations, and demonstration.

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

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

The marks will be converted into Grade points.

24.0 YEAR ONE SEMESTER TWO

24.1 WORKSHOP PRACTICE II

COURSE CODE: **CCJ 1201**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

COURSE DESRIPTION:
This course introduces students to the hands on training in all the areas taught theoretically during the semester

LEARNING OUTCOMES
Students should be able to perform using hands on the work place, apply methods and skills to construct different classes/types of door frames

OBJECTIVES OF THE COURSE
By the end of the course, students should be able to :-
1. Demonstrate skill of using manufactured boards
2. Construct frames
3. Perform tasks in using iron mongery

COURSE CONTENT

CHAPTER ONE
1.0 **Adhesives**
1.1 Identification of adhesives
1.2 Preparation and methods
1.3 Application of adhesives

CHAPTER TWO
2.0 **Manufactured boards**
2.1 Identification of classes/types
2.2 Application of methods and skills in using manufactured boards

CHAPTER THREE
3.0 **Door frames**
3.1 Apply methods and skills to construct different classes/types of door frames
3.2 Design of sections

CHAPTER FOUR
4.0 **Doors**
4.1 Apply skills and methods to construct different classes of doors

CHAPTER FIVE
Iron mongery and fixing devices
Identification of types of iron monger
Identification of types of fixing devices
Uses of nails, screws, bolts, hinges, locks and bolts, connectors, shrinkage plates, hangers, anchors, stripling and corrugated fasteners

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;

ourse 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. Peter Bret Carpentry and Joinery, Level 1,2
2. Wood working , Motivate series 1, 2
3. Frank Hilton; Carpentry and joinery
4. Peter Bret; Carpentry and Joinery for craft building

24.2 CRAFT THEORY AND SCIENCE II

COURSE CODE: **CCJ 1202**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESRIPTION:

This course introduces students to the adhesives, boards, frames, Doors and iron mongery

LEARNING OUTCOMES
Students should be able to display the mastery of using adhesives, manipulating boards and the use of iron mongery in doors

OBJECTIVES OF THE COURSE
By the end of the course students should be able to;
1. Apply adhesives
2. Use manufactured boards

COURSE CONTENT

CHAPTER ONE
1.0 Adhesives:
1.1 Classification
1.2 Preparation
1.3 Uses
1.4 Manufactured Boards
1.5 Ply wood, block, batten, laminated, Fibre, Veneers, chip and cardboards.

CHAPTER TWO
2.0 Door frames
2.1 Classification
2.2 Design of section
2.3 Methods of joining
2.4 Doors:
2.5 Classification
2.6 Battened doors
2.7 Ledged and battened
2.8 Framed, ledged, braced and battened.

CHAPTER THREE
3.0 Iron Mongery and fixing Devices:
3.1 Types:
3.2 Nails
3.3 Screws
3.4 Bolts
3.5 Hinges
3.6 Locks and bolts
3.7 Connectors

3.8 Shrinkage plates
3.9 Hangers
3.10 Anchors
3.11 Stripling and corrugated fastener.

CHAPTER FOUR
4.0 Heat
4.1 Form of heat transmission.
4.2 Comparison for heat insulation, properties of various woods,
4.3 Fibres and chip boards.
4.4 Effects of color and nature of surface on heat insulation.
4.5 Reduction of air droughts.
4.6 Sound Insulation
4.7 Thermo insulation.

CHAPTER FIVE
5.0 Porosity and Damp-proofing
5.1 Porosity
5.2 Absorption of water by materials.
5.3 Rate of absorption.
5.4 The prevention of capillarity in walls.
5.5 Surface tension.
5.6 Capillary attraction.
5.7 Absorption by capillarity.
5.8 Damp proof courses.
5.9 Bituminous felts.
5.10 Asbestos damp courses.
5.11 Glazed bricks.
5.12 Lead, copper slates.

CHAPTER SIX
6.0 Acids and Corrosive Effects in Timber
6.1 Acidity and Alkalinity.
6.2 Effects of wood on various metals.
6.3 Stain and corrosion.

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. Peter Bret Carpentry and Joinery, Level 1,2
2. Wood working , Motivate series 1, 2
3. Frank Hilton; Carpentry and joinery
4. Peter Bret; Carpentry and Joinery for craft building

24.3 GEOMETRY II

COURSE CODE: **CCJ 1203**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESRIPTION:
This course introduces students to the solid geometry-developments, pictorial projections, orthographic projections and arches.

LEARNING OUTCOMES
By end of this course, students should be able to manipulate drawings, interpret drawings, measurements, and use them in construction and design

OBJECTIVES OF THE COURSE
By the end of this course, students should be able to:
1. Develop surfaces
2. Make pictorial representations
3. Construct orthographic views
4. Design arches
5. Construct moulds

COURSE CONTENT

CHAPTER ONE
1.0 Solids
1.1 Development.
1.2 Sections.
1.3 True shapes.
1.4 Prisms.
1.5 Pyramids.
1.6 Cylinders.
1.7 Cones.
1.8 Application to craft problems.

CHAPTER TWO
2.0 **Pictorial Projections of Solids: Simple solids** e.g.
2.1 Prism.
2.2 Cylinders.
2.3 Cones.
2.4 Pyramids.
2.5 Joints in the following projections e.g. isometric, oblique, axonometric (with instrument and by free hand).

CHAPTER THREE
3.0 Orthographic Projection
3.1 General principles of orthographic projection of simple solids joints and joinery construction (reference to technology).

CHAPTER FOUR

4.0 Arches

4.1 Various methods of drawing arch curves (curves applicable to carpentry and joinery).

CHAPTER FIVE

5.0 Mouldings

5.1 Designs of simple mouldings as applied to joinery.

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. R. S Rhodes & L.B. Cook; Basic Engineering Drawing
2. Eric Isanga; Technical Drawing, Advanced level
3. Peter Bret Carpentry and Joinery, Level 1,2
4. Wood working , Motivate series 1, 2
5. Frank Hilton; Carpentry and joinery
6. Peter Bret; Carpentry and Joinery for craft building

24.4 MATHEMATICS II

COURSE CODE: **CCJ 1204**

CREDIT UNIT: **3**

CONTACT HOURS: **45**

COURSE DESRIPTION:
This course introduces students to solve mathematical related problems in the field deals with laws and relevant equations which help in solving daily problems.

LEARNING OUTCOMES
Students should be able to appreciate the significance of mathematics in carpentry work and the use of formula to solve a lot of carpentry problems.

OBJECTIVES
By the end of this course students 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
1.1 Introduction to vector representation
1.2 Types of vectors
1.3 Addition and subtraction of vectors

CHAPTER THREE
3.0 **Permutations and combinations**;
3.1 The factorial notation, Pascal's triangle,
3.1.1 General binomial expansion of $(1+X)^n$
3.1.2 Sequences & series
3.2 **Polynomials**
3.2.1 Multiplication and division of algebraic expression
3.2.2 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 Medium
5.4 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
2 Engineering Mathematics 2nd Edition by K. A. Stroud
4. Advanced Modern Engineering Mathematics, Fourth Edition by Glyn James 2003
5. An introduction to Mathematics for Engineers (Mechanics) by Stephen Lee
6. Advanced Engineering Mathematics by Dean. Duffy
7. Probability and Statistics by Sandler and Thornings

24.5 COMPUTER APPLICATIONS II

Course code **CCJ 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
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.

24.6 CARPENTRY AND JOINERY PROJECT II

COURSE CODE: **CCJ 1206**

CREDIT UNIT: **5**

CONTACT HOURS: **75**

PROJECT DESRIPTION:
This project introduces students to the boards and doors and their frames,

PROJECT OUTCOMES
By the end of this course, the students should be able to work on a real life project and present results.

PROJECT ACTIVITIES
1. Make manufactured boards
2. Make doors and frames
3. Make reports and present
4. Innovation: Student's self initiated project relevant to the programme.

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

PROJECT ASSESSMENT
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.

24.7 FIELD WORK

Course code CCJ 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 OF THE FIELD
By the end of this course the learners 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. Working under the guidance of the Industrial supervisor
2. Supervise the Intern on the set tasks
3. 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 TWO SEMESTER ONE

25.1 WORKSHOP PRACTICE III

COURSE CODE: **CCJ 2101**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

COURSE DESRIPTION:
This course introduces students to the hands on training in all the areas taught for example, constructing doors, gates and windows.

LEARNING OUTCOMES
Students should be able to perform using hands on the work place, identify the procedures of constructing entrance, gates, factory entrance gates and fastening

OBJECTIVES OF THE COURSE
By the end of the course, students should be able to.
1. Demonstrate skill of using wood working machines
2. Construct doors, gates and windows
3. Perform tasks in timber floors

COURSE CONTENT

CHAPTER ONE
1.0 Wood working machines
1.1 Observe safety and regulation
1.2 Identification of wood working machines
1.3 Shaping
1.4 Planning
1.5 Saws
1.6 Mortising
1.7 Tenoning

CHAPTER TWO
2.0 Working out for hand and machine work
2.1 Use of template patterns
2.2 Design and construction of marking, holding, guiding and assembling jigs

CHAPTER THREE
3.0 Gates
3.1 Identify the procedures of constructing entrance, gates, factory entrance gates and fastening

CHAPTER FOUR
4.0 Door lining
4.1 Apply procedures and methods of constructing solid, Skelton and framed door lining

CHAPTER FIVE
5.0 Doors

5.1 Apply skills in preparing materials for construction of flush, glazes, sliding and curved doors

CHAPTER SIX

6.0 Windows

1.1 Apply skills and prepare materials for the construction of:
1.2 Casement windows and solid frames
1.3 Lipped sashes
1.4 Horizontal pivot hung sashes
6.5 Appropriate iron monger

CHAPTER SEVEN

7.0 Timber floors

7.1 Identify types and construction of:
7.2 Single floor for ground above floor
7.3 Trimming to openings
7.4 Provision for fitting and service access
7.5 Floor finishes for specific purpose

CHAPTER EIGHT

8.0 Partitions

8.1 Identify types
8.2 Application of skills to sound proofing
8.3 Treatment at the openings
8.4 Provision for fittings and serviced access
8.5 Fixing covering material

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. Peter Bret Carpentry and Joinery, Level 1,2
2. Wood working , Motivate series 1, 2
3. Frank Hilton; Carpentry and joinery
4. Peter Bret; Carpentry and Joinery for craft building

25.2 CRAFT THEORY AND SCIENCE III

COURSE CODE: **CCJ 2102**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESRIPTION:
This course introduces students to the wood working machines and the design of gates doors, door lining and windows. It also covers floors and stairs.

LEARNING OUTCOMES
By the end of this course, students should be able to use wood working machines, Saws: Circular Saws, Rip Saws, Jig saws and dimension saw.

OBJECTIVES OF COURSE
1. Use of wood working machines
2. Design doors linings and windows
3. Design stairs and floors

COURSE CONTENT

CHAPTER ONE
1.0 Wood working Machine
1.1 General safety
1.2 Classification
1.3 Shaping: Band Saw, Spindle moulder, (Types of specific purposes of cutter heads in General use)
1.4 Planning: Thicknesses, hand feeder surface planner.
1.5 Saws: Circular Saws, Rip Saws, Jig saws and dimension saw.
1.6 Mortising: Narrow chain mortiser and chisel mortising machine.

CHAPTER TWO
2.0 Marking out for hand and machine work
2.1 Uses of template patterns.
2.2 Design and construction of marking, holding, guiding and assembling jigs.
1.0 Weathering
1.1 Functions of weathering drips, throats and throatings.
1.2 Forms of joints to exclude water.
1.3 Weather strips.

CHAPTER TWO
2.0 Simple Machines
2.1 Forces
2.3 Moments
2.4 Machines
2.5 Mechanical advantage
5.7 Velocity Ratio
2.7 Efficiency of Machines
2.8 Wedge
2.9 The Wheel and Axle.

2.9.1 Pulley Systems
2.9.2 The Winch.

CHAPTER THREE
3.0 Simple Application of Use of Pulleys Lifting and Hoisting Application
3.1 Principles of lever, wedge and their application.
3.2 Triangular and Rectangular Framing
3.3 Triangular and Rectangular Frames.
3.4 Use of triangulation in securing stability with illustrations for brackets, doors gates and timber construction including simple roof frames and scaffoldings.

CHAPTER FOUR
4.0 Moments of Forces
4.1 Calculation for reaction of simple supported beams with point loads.
4.2 Gates:
4.3 Entrance gates
4.4 Factory entrance gates
4.4 Fastenings
4.5 Door linings:
4.6 Classification
4.7 Solids
4.8 Skeleton
4.9 Framed

CHAPTER FIVE
5.0 Doors
5.1 Types
5.2 Flush doors
5.3 Glazed doors
5.4 Sliding doors
5.5 Doors with shaped hands in single curvature.

CHAPTER SIX
6.0 Window
6.1 Casement windows and solid frames
6.2 Lipped sashes
6.3 Horizontal pivot hung sashes
6.4 Iron monger

CHAPTER SEVEN
7.0 Timber floors:
7.1 Types
7.2 Single floor construction for ground above floor.
7.3 Trimmings to openings.
7.4 Provision of fitting and service access.
7.5 Floor finishes for specific purposes.

CHAPTER EIGHT
8.0 Partitions:
8.1 Stud Partitioning.
8.2 Sound proofing
8.3 Treatment at the openings
8.4 Provision for fittings and service access.

8.5 Fixing covering materials.
8.6 Stairs:
8.7 Classification.
8.8 Straight flight between walls or with open strings.

MODE OF DELIVERY

This mode of delivery will be through hands on, illustrations, site visits, guided discussion, practical work, innovation, presentations, and demonstration.

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. Peter Bret Carpentry and Joinery, Level 1,2
2. Wood working , Motivate series 1, 2
3. Frank Hilton; Carpentry and joinery
4. Peter Bret; Carpentry and Joinery for craft building

25.3 GEOMETRY III

COURSE CODE: **CCJ 2103**

CREDIT UNIT: **3**

CONTACT HOURS: **45**

COURSE DESRIPTION:
This course introduces students to the conic section-parabola and hyperbola, enlargement and reduction and roof geometry.

LEARNING OUTCOMES
Students should be able to manipulate drawings, interpret drawings, measurements, and use them in construction and design

OBJECTIVES OF THE COURSE
By end of this course, students should be able
1. Differentiate between hyperbola and parabola
2. Enlarge and reduce simple figures
3. Apply geometry to construct roofs

COURSE CONTENT

CHAPTER ONE
1.0 The Parabola and the Hyperbola
1.1 Construction of parabola and hyperbola.

CHAPTER TWO
2.0 Enlargement and Reduction
2.1 Introduction and reduction of rectilinear and curved figures such as mouldings.

CHAPTER THREE
3.0 Roof Geometry
a) Roofing geometry
3.1 Roof planning
3.2 Development of roof surfaces (Roof) with rectangular and L-shaped plans and of equal pitch.)
3.3 Determination of length and bevels of roof members.

b) Roofing bevels
3.4 Side and edge bevels of purling.
3.5 Side and edge bevels at heads of jack rafters.
3.6 Bevels at heads of heap and valley rafters.
3.7 Development of the foot of a hip and valley rafters.

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

2. R. S Rhodes & L.B. Cook; Basic Engineering Drawing
3. Eric Isanga; Technical Drawing, Advanced level
4. Peter Bret Carpentry and Joinery, Level 1,2
5. Wood working , Motivate series 1, 2
6. Frank Hilton; Carpentry and joinery
7. Peter Bret; Carpentry and Joinery for craft building

25.4 APPLIED MATHEMATICS

COURSE CODE: **CCJ 2104**

CREDIT UNIT: **3**

CONTACT HOURS: **45**

COURSE DESRIPTION:
This course introduces students to the calculations on floors, roofs and speed of saws. It covers moisture content and complex numbers

LEARNING OUTCOMES
Students should be able to appreciate the significance of mathematics in carpentry work and the use of formula to solve a lot of carpentry problems.

OBJECTIVES
By the end of this course, students should be able:
1. Calculate the members for the roof and floors
2. Determine the speed of saws
3. Polar form of complex numbers

COURSE CONTENT

CHAPTER ONE
1.0 Floors and Roofs
1.1 Floor and boarding calculations
1.2 The metre square and metre run
1.3 Determination of the quantity and allowance for cutting and waste
1.4 Calculation of cost and weight of materials

CHAPTER TWO
2.0 Calculation of Roof members and stair case
2.1 Length of ridges, common rafters, hip rafters, valley rafters and jack rafters
2.2 Area of surface of roofs
2.3 Calculation of stairs, rise, going number of boards and rises in stairs

CHAPTER THREE
3.0 Calculation of Moisture content
3.1 Determination of the moisture content

CHAPTER FOUR
4.0 Complex numbers
4.1 Equal complex numbers
4.2 Graphical representation of complex numbers
4.3 Polar form of complex numbers
4.4 Exponential form of complex numbers

CHAPTER FIVE

5.0 Machine calculations

5.1 Saws; speed of saws
5.2 Cutter block speeds
5.3 Grinding wheel speeds
5.4 Tooth pitch of saws
5.5 Length of tooth top
5.6 Gullet radius and depth

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. R. S Rhodes & L.B. Cook; Basic Engineering Drawing
2. Eric Isanga; Technical Drawing, Advanced level
3. Peter Bret Carpentry and Joinery, Level 1,2
4. Wood working , Motivate series 1, 2
5. Frank Hilton; Carpentry and joinery
6. Peter Bret; Carpentry and Joinery for craft building

24.6 ENGINEERING SOFT WARE

COURSE CODE **CCJ 2106**

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 ArchiCAD 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.

25.7 CARPENTRY AND JOINERY PROJECT III

COURSE CODE: **CCJ 2107**

CREDIT UNIT: **5**

CONTACT HOURS: **75**

PROJECT DESRIPTION:
This course project introduces students to hands on training in accomplishing a real life project.

PROJECT OUTCOMES
By the end of the course, the students should be able to work on a real life project and present results.

OBJECTIVES OF THE PROJECT
1. Identify the procedures of construction of entrances, gates, factory entrance gates and fastening
2. Apply skills in the Construction of doors, lining and frames
3. Apply skills and prepare materials for the construction of doors, gates and windows
4. Construct floors and partitions

PROJECT ACTIVITIES
1.0 Gates
2.0 Doors, lining and frames
3.0 Windows
4.0 Timber floors and partitioning

MODE OF DELIVERY
This mode of delivery will be through hands on, illustrations, site visits, guided discussion, practical work, innovation, presentations, and demonstration.

ASSESSMENT OF THE COURSE

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

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

The marks will be converted into Grade points.

26.0 YEAR TWO SEMESTER TWO

26.1 WORKSHOP PRACTICE IV

COURSE CODE: **CCJ 2201**

CREDIT UNIT: **05**

CONTACT HOURS: **75**

COURSE DESRIPTION:
This course introduces students to the practical work on stairs, roofs, shelves and borrowed lights.

LEARNING OUTCOMES
Students should be able to perform using hands on the work place, Construct formwork,

OBJECTIVES OF THE COURSE
By the end of the course, the students should be able to
1. Identify stairs and construct them
2. Construct formwork
3. Build shores

COURSE CONTENT

CHAPTER ONE
1.0 Stairs
1.2 Identify the classes of stairs
1.3 Straight flights

CHAPTER TWO
2.0 Centres for arches up to 3m opening
2.1 Apply methods and procedures for construction of semi-circular, elliptical and segmental
1.0 Erection
1.1 Supports
1.2 Use of steel props

CHAPTER THREE
3.0 Roofs
3.1 Apply methods of construction of trussed roof and trimming to chimney
3.2 Formwork and supports for concrete Construction
3.3 Precast, cast in situ, units for lintels, simple columns, sill posts, beams, floors and roof slabs

CHAPTER FOUR
1.0 **Shoring**
1.1 Application methods and skill/procedures in construction of Dead, Raking and Flying shores (Limited to two storey buildings)
1.2 Wood surrounding metal windows
1.3 Identification of sections of members

4.4 Application methods in construction and fixing

CHAPTER FIVE
5.0 Simple Built in fitments
5.1 Application of methods and skills in construction and fixing built in fitment

CHAPTER SIX
6.0 Shelving
1.1 Application of skills and methods of:
1.2 Shelving internal angles
1.3 Shelving on plain walls
1.4 Shelving on recesses
6.5 Wood and metal brackets

CHAPTER SEVEN
3.0 Borrowed lights
3.1 Borrowed lights in walls
3.2 Borrowed light in partitions
7.3 Borrowed lights in ceiling

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. R. S Rhodes & L.B. Cook; Basic Engineering Drawing
2. Eric Isanga; Technical Drawing, Advanced level
3. Peter Bret Carpentry and Joinery, Level 1,2
4. Wood working , Motivate series 1, 2
5. Frank Hilton; Carpentry and joinery
6. Peter Bret; Carpentry and Joinery for craft building

26.2 CRAFT THEORY AND SCIENCE IV

COURSE CODE: **CCJ 2202**

CREDIT UNIT: **4**

CONTACT HOURS: **60**

COURSE DESRIPTION:
This course introduces students to the arches, roofs, formwork, shelving and borrowed lights, trimming to chimney stacks.

LEARNING OUTCOMES
Students should be able to design centres, roof work, shelves and formwork, trussed roofs, construction and fixing.

OBJECTIVES OF THE COURSE
By the end of the course, students should be able to:
1. Design centers
2. Construct roofs
3. Construct and fix shores

COURSE CONTENT

CHAPTER ONE
1.0 Centres for Arches up to 3m opening
1.2 Semi circular.
1.3 Semi Elliptical.
1.4 Segmental.
1.5 Erection.
1.6 Support and provision for easing and striking.
1.7 Use of steel props.

CHAPTER TWO
4.0 Roofs:
2.1 Trussed roofs.
2.2 Construction.
2.3 Trimming to chimney stacks.

CHAPTER THREE
3.0 Form work and supports for concrete construction.
4.1 Precast.
4.2 Cast in situ.
3.3. Units for lintels.
3.4 Simple columns.
3.5 Sills.
3.5 Posts.
3.6 Beams.
3.7 Floors.
3.8 Roof slabs.

CHAPTER FOUR
5.0 Shoring
5.1 Dead shores
5.2 Raking shores
4.3 Flying shores (limited to two storied buildings)

CHAPTER FIVE
6.0 Wood Surrounds to Metal Windows
5.1 Sections of members
5.2 Construction and fixing.
5.3 Simple Built-In Fitments
5.4 Construction and fixing

CHAPTER SIX
6.0 Shelving
6.1 Shelving at internal angles
6.2 Shelving on plain walls
6.3 Shelving on recesses.
6.4 Wood and metal brackets.
6.5 Borrowed Lights
6.6 Borrowed lights in walls.
6.7 Borrowed lights in partitions.
6.8 Borrowed lights in ceilings.

CHAPTER NINE
9.0 Parallelogram and Triangle of Forces
9.1 Graphical representation of force resultant.
9.2 Equilibrium of forces.
9.3 Polygon of forces.
9.4 Timber.
9.5 The strength of timber to resist compression and tension.
9.6 Joints in timber frames to resist compression and tension.
9.7 Effects of position of knots and notches on strength.

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

2. Peter Bret Carpentry and Joinery, Level 1,2
3. Wood working , Motivate series 1, 2
4. Frank Hilton; Carpentry and joinery
5. Peter Bret; Carpentry and Joinery for craft building

26.3 GEOMETRY IV

COURSE CODE: **CCJ 2203**

CREDIT UNIT: **3**

CONTACT HOURS: **45**

COURSE DESRIPTION:
This course introduces students to the pictorial representation, interpenetration of inclined solids and the

LEARNING OUTCOMES
Students should be able to manipulate drawings, interpret drawings, measurements, and use them in construction and design, also inclined plans

OBJECTIVES OF THE COURSE
By end of this course, students should be able to :
1. Make pictorial representations
2. Construct interpenetrated surfaces

COURSE CONTENT

CHAPTER ONE
1.0 Pictorial Projection of:
1.1 Moved advanced examples in oblique and isometric projection, including the representation of solids with curved surfaces.

CHAPTER TWO
2.0 Interpretation
2.1 Inclined plans
2.2 Cylinders
2.3 Prisms
2.4 Cones
2.5 Pyramid
2.6 Penetrating e.g. roofs

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

2. R. S Rhodes & L.B. Cook; Basic Engineering Drawing
3. Eric Isanga; Technical Drawing, Advanced level
4. Peter Bret Carpentry and Joinery, Level 1,2
5. Wood working , Motivate series 1, 2
6. Frank Hilton; Carpentry and joinery
7. Peter Bret; Carpentry and Joinery for craft building

26.4 ENTERPRENUERSHIP SKILLS

COURSE CODE: **CCJ 2204**

CREDIT UNIT: **04**

CONTACT HOURS: **60**

COURSE DESCRIPTION
This course introduces students to the basic entrepreneurship skills of starting and running up, spots business opportunities and test them and enterprise for self employment, survey the market for the business ideas.

LEARNING OUTCOMES
Students should be able to start up a business and create self employment,
Identify the current trends of entrepreneurial development and identify the current trends of entrepreneurial development.

OBJECTIVES OF THE COURSE
By the end of the course students should be able to,
1. Describe entrepreneurship objectives and history
2. Spot business opportunities and test them.
3. Survey the market for the business ideas.
4. Start up a business and create Self employment
5. Identify the legal forms of business.
6. Register a business.
7. Describe Sources Of Capital
8. Carry out the Cost Analysis of an enterprise
9. Manage the accounting books of the business enterprise

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

26.5 PROJECT IV

COURSE CODE: **CCJ 2205**

CREDIT UNIT: **5**

CONTACT HOURS: **75**

PROJECT DESRIPTION:
This course introduces students to the practical work on stairs, roofs, shelves and borrowed lights

PROECT OUTCOMES
Students should be able to work on a real life project and present results.

OBJECTIVES OF THE PROJECT
1. Apply methods and procedures for construction of semi-circular, elliptical and segmental
2. Apply methods of construction of trussed roof and trimming to chimney
3. Application methods and skill/procedures in construction of Dead, Raking and Flying shores (Limited to two storey buildings)

PROJECT ACTIVITIES
1. Construction Stairs
2. Construction of Centres for arches up to 3m opening
3. Construction of Roofs
4. Shoring

MODE OF DELIVERY
This mode of delivery will be through hands on, illustrations, site visits, guided discussion, practical work, innovation, presentations, and demonstration.

ASSESSMENT OF THE COURSE

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

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

The marks will be converted into Grade points.

REFERENCES

1. R. S Rhodes & L.B. Cook; Basic Engineering Drawing
2. Eric Isanga; Technical Drawing, Advanced level
3. Peter Bret Carpentry and Joinery, Level 1,2
4. Wood working , Motivate series 1, 2
5. Frank Hilton; Carpentry and joinery
6. Peter Bret; Carpentry and Joinery for craft building

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