NATIONAL BOARD FOR TECHNICAL EDUCATION

PLOT B BIDA ROAD, P.M.B. 2239, KADUNA, NIGERIA

HIGHER NATIONAL DIPLOMA

IN

LEATHER AND LEATHER PRODUCTS TECHNOLOGY PROGRAMME (FOOTWEAR OPTION)

CURRICULUM AND COURSE SPECIFICATIONS

DEVELOPED IN COLLABORATION

WITH

NIGERIAN INSTITUTE OF LEATHER AND SCIENCE TECHNOLOGY (NILEST)
P. M. B 1034, SAMARU – ZARIA, NIGERIA

APRIL 2026

PREFACE

The development of the Higher National Diploma (HND) in Leather and Leather Products Technology (Footwear option) marks a significant milestone in strengthening Nigeria's capacity for value addition, industrial innovation, and sustainable economic growth within the leather sector. This curriculum has been carefully designed to equip diplomates with advanced technical competencies, entrepreneurial skills, and industry-relevant knowledge required to meet the evolving demands of the footwear manufacturing industry at both national and global levels.

The programme reflects a deliberate effort to bridge the gap between theoretical instruction and practical application by incorporating modern production techniques, quality assurance practices, design innovation, and emerging technologies in footwear development. It also emphasises sustainability, occupational safety, and competitiveness, thereby positioning Footwear Technologists to contribute meaningfully to job creation, industrial development, and export promotion.

This achievement would not have been possible without the visionary support and sponsorship of the Nigerian Institute of Leather and Science Technology (NILEST), Zaria. The Institute's commitment to advancing leather education and research has played a pivotal role in bringing this curriculum to fruition.

Special appreciation is extended to the distinguished resource persons, drawn from academia, industry, and professional bodies, whose expertise and invaluable contributions ensured the quality and relevance of this curriculum. Their insightful inputs, rigorous reviews and dedication have helped shape a robust and forward-looking programme that aligns with global best practices and industry expectations.

It is our expectation that this curriculum will serve as a dynamic tool for training highly skilled manpower in footwear technology, fostering innovation, and enhancing the competitiveness of Nigeria's leather industry.

Prof. Idris M. Bugaje
Executive Secretary
National Board for Technical Education
Kaduna
Nigeria.

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GENERAL INFORMATION

1.0 TITLE OF THE PROGRAMME:

The title of the programme is Higher National Diploma in Leather and Leather Products Technology (Footwear Option)

2.0 GOAL AND OBJECTIVES OF THE PROGRAMME

2.1 Goal

The programme is designed to develop Footwear Technologists with a sound understanding of the necessary science and technology of footwear production, with the requisite skills that would enhance entrepreneurial skills.

2.2 Objectives:

At the end of the programme, the diplomates should be able to:

i. Apply technical skills for sustainable footwear and leather product design and production;
ii. Plan and manage production and machines, and resources effectively;
iii. Apply knowledge of material tests and analysis to evaluate quality of footwear and footwear machines;
iv. Use knowledge of effective communication and showcase footwear design concepts to industry stakeholders;
v. Use technical and entrepreneurial skills for self-reliance and economy empowerment;
vi. Assist in conducting research in the field of footwear and leather products technology;
vii. Provide technical trainings in schools, colleges and related institutions on footwear and leather products technology;
viii. Supervise middle level technical staff on a production line to ensure efficiency, quality and safety;
ix. Assist in conducting research in the field of footwear technology;
x. Demonstrate entrepreneurship, factory management and supply chain competencies;
xi. Operate some basic equipment and machines used for footwear manufacture.
xii. Identify and select the raw materials and machinery required for footwear manufacture;
xiii. Supervise middle-level technical staff on the production line to ensure efficiency, quality and safety

3.0 ENTRY REQUIREMENTS

The general entry requirements for the programme shall include:

a. Candidates with at least ND in Leather Technology (lower credit) and related fields of study, such as Polymer Technology and Textile Technology, will be considered;
b. In addition to ‘a’ above, the candidate must have at least five (5) credit level passes in SSCE/ GCE/ NECO/ NABTEB/ SAISSCE or equivalent in Chemistry, Physics, Biology/Agricultural Science, Mathematics, and English language at not more than two sittings;
c. One-year mandatory Industrial Training after the second year of the National Diploma Programme.

4.0 CURRICULUM

4.1 The curriculum of the HND programme consists of three main components. These are:

i. General studies/education
ii. Foundation courses
iii. Professional courses

4.2 The General Education component shall include courses in:

i. English Language
ii. Communication Skills
iii. Business Statistics
iv. Entrepreneurship

4.3 The General Education component shall account for not more than 15% of total contact hours for the programme.

4.4 Foundation courses include subjects such as Entrepreneurship, Statistics and Engineering etc. The number of hours will vary by programme and may account for about 10–15% of the total contact hours.

4.5 Professional Courses are courses which give the student the theory and practical skills he/she needs to practice his/her field of calling at the technical/technologist level.

5.0 STRUCTURE OF PROGRAMME

This is a two-year Programme, that is, four semesters of classroom, laboratory, field, and workshop activities at the institution. Each semester shall be of 17 weeks duration, made up as follows: 15 Contact weeks of teaching, i.e. recitation, practical exercises, quizzes, tests, etc. and 2 weeks for examination.

6.0 ACCREDITATION

Each Programme offered at the HND level shall be accredited by the NBTE before the Diplomates can be awarded the Higher National Diploma qualification. Details about the process of accrediting a Programme for the award of the HND are available from the office of the Executive Secretary, National Board for Technical Education, Plot B, Bida Road, P.M.B. 2239, Kaduna, Nigeria.

7.0 CONDITIONS FOR THE AWARD OF HND LEATHER AND LEATHER PRODUCTS TECHNOLOGY (FOOTWEAR OPTION)

Institutions offering this Programme will award the HND certificate to candidates who successfully complete the Programme after passing the prescribed coursework, examinations, project, etc. Such candidates should have completed between 72 and 120 semester Credit Units.

8.1 GRADING OF COURSES

Courses shall be graded as follows:

MARKED RANGE	LETTER GRADE	WEIGHTING
75% and above	A	4.00
70% – 74%	AB	3.50
65% – 69%	B	3.25
60% – 64%	BC	3.00
55% – 59%	C	2.75
50% – 54%	CD	2.50
45% – 49%	D	2.25
40% – 44%	E	2.00

8.2 CLASSIFICATION OF DIPLOMAS

Higher National Diploma Certificates shall be awarded based on the following classifications:

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

9.0 ACADEMIC STAFF QUALIFICATIONS

9.1 The academic staff should possess a BSc or HND and Higher Degrees in: Leather/Footwear Technology or related disciplines such as Chemistry, Chemical Engineering, Textile Science and Technology, Polymer Technology, Industrial Design and Material Science. In addition, they should be registered with their relevant Professional Bodies.

9.2 Headship of the Department:

Holders of HND or Bachelor's degree in any of the above professions listed in 9.1 and must not be below the rank of a Senior Lecturer.

10.0 GUIDANCE NOTES FOR TEACHERS OF THE PROGRAMME

10.1 The new curriculum is drawn in unit courses. This is in keeping with the provisions of the National Policy on Education, which stresses the need to introduce semester credit units, enabling a student who so wishes to transfer the units already completed at an institution of similar standard from which he is transferring.

10.2 In designing the units, the principle of the modular system by product has been adopted; thus, making each of the professional modules, when completed, provides the student with technician operative skills, which can be used for employment purposes. As the success of the credit unit system depends on the articulation of the Programme between the institutions and industry, the curriculum content has been written in terms of behavioural objectives. Thus, to make it clear to all the expected performances of the students who successfully complete some of the courses or the diplomates of the Programme. There is a slight departure in the presentation of the performance-based curriculum, which requires the conditions under which the performance is expected to be carried out and the criteria for the acceptable levels of performance. It is a deliberate attempt to further involve the staff of the department teaching the Programme to write their own curriculum, stating the conditions existing in the institution under which the performance can take place, and to follow that with the criteria for defining an acceptable level of performance. The Departmental submission on the final curriculum may be vetted by the Academic Board of the institution.

10.3 Our aim is to continue to see to it that a solid internal evaluation system exists in each institution for ensuring minimum standards and quality of education in the programmes offered throughout the Technical and Vocational Education (TVE) system.

10.4 The teaching of the theory and practical work should, as much as possible, be integrated. Practical exercises, especially those in professional courses and laboratory work, should not be taught in isolation from the theory. For most courses, there should be a balance between theory and practice in the ratio of 40:60, or the reverse.

11.0 MANDATORY SKILLS QUALIFICATION (MSQ) FOR HIGHER NATIONAL DIPLOMA (HND) PROGRAMMES.

MSQ courses span across two semesters of a programme, which requires the student to learn a hands-on skill qualification, either relevant or related to his area of study. It is mandatory for HND graduates to obtain certification from the appropriate awarding body for Nigerian Skills Qualifications or any equivalent proprietary body. This policy of the Board requires that students should not be allowed to graduate without obtaining certification in the skill area they chose as a compulsory graduating requirement. The MSQ is aimed at adding value to all TVET graduates towards dual certification by way of obtaining a HND certificate and additional skills qualification to meet local and global demand for skilled labour.

CURRICULUM TABLE

YEAR ONE: SEMESTER ONE

S/N	COURSE CODE	COURSE TITLE	L	T	P	CU	CH
1.	GNS 301	Use of English III	2	0	0	2	2
2.	COM 311	Introduction to Computer Programming	2	0	0	2	2
3.	LPT 311	Leather Manufacture I	2	0	2	4	4
4.	PLT 315	Commercial Polymers	1	0	2	3	3
5.	MSQ 311	Principles of Quality Assurance Assessment	1	0	1	2	2
6.	LFT 311	Production Technology I	2	0	1	3	3
7.	LFT 312	Computer-Aided Design	1	0	2	3	3
8.	LFT 313	Materials Testing I	2	0	1	3	3
9.	LFT 314	Pattern Production I	2	0	1	3	3
10.	LFT 315	Footwear Graphics	1	0	2	3	3
11.	LFT 316	Footwear Accessories Technology	2	0	0	2	2
TOTAL			**18**	**0**	**12**	**30**	**30**

YEAR ONE: SEMESTER TWO

S/N	COURSE CODE	COURSE TITLE	L	T	P	CU	CH
1.	GNS 302	Communication in English III	2	0	0	2	2
2.	ENT 326	Practice of Entrepreneurship I	2	0	2	4	4
3.	MSQ 321	Practice of Quality Assurance Assessment	1	0	1	2	2
4.	PLT 222	Adhesive and Paint Technology	2	0	0	2	2
5.	PLT 322	Morphology and Physical Properties of Polymers	1	0	2	3	3
6.	LPT 321	Leather Manufacture II	2	0	2	4	4
7.	LFT 321	Production Technology II	2	0	1	3	3
8.	LFT 322	Materials Testing II	2	0	1	3	3
9.	LFT 323	Pattern Grading	2	0	1	3	3
10.	LFT 324	Footwear Fashion Design	2	0	1	3	3
TOTAL			**18**	**0**	**11**	**29**	**29**

YEAR TWO: SEMESTER ONE

S/N	COURSE CODE	COURSE TITLE	L	T	P	CU	CH
1.	GNS 401	Communication in English IV	2	0	0	2	2
2.	SBM 413	Small Business Management	2	0	0	2	2
3.	STA 411	Business Statistics	2	0	0	2	2
4.	ENT 416	Practice of Entrepreneurship	2	0	2	4	4
5.	MEP 407	Production Management	2	0	0	2	2
6.	LPT 413	Leather Dyeing and Finishing II	2	0	0	2	2
7.	LFT 411	Pattern Production II	1	0	1	2	2
8.	LFT 412	Bespoke Footwear Design	1	0	1	2	2
9.	LFT 413	Footwear Design Presentation	2	0	1	3	3
10.	LFT 414	Research Methodology	1	0	1	2	2
TOTAL			**17**	**0**	**6**	**23**	**23**

YEAR TWO: SEMESTER TWO

S/N	COURSE CODE	COURSE TITLE	L	T	P	CU	CH
1.	GNS 402	Literary Appreciation and Oral Composition	2	0	0	2	2
2.	MKT 421	Marketing and Brand Management	2	0	0	2	2
3.	CHE 425	Safety and Environmental Control	2	0	0	2	2
4.	LFT 421	Sustainable Design	2	0	0	2	2
5.	LFT 422	Packaging and Branding	2	0	1	3	3
6.	LFT 423	Leather Goods Fashion Design	2	0	0	2	2
7.	LFT 424	Project	0	0	6	6	6
TOTAL			**12**	**0**	**7**	**19**	**19**

YEAR I: SEMESTER I

PRODUCTION TECHNOLOGY I

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: PRODUCTION TECHNOLOGY I		**Course Code: LFT 311**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 2 Hours/Week**
Year I	**Semester I**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: This course is designed to acquaint the student with the skills to produce footwear in the industry.			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Understand the various departments in footwear Production;
2.0 Know the technicalities of footwear;
3.0 Understand machines and equipment for footwear;
4.0 Understand the different types of soling materials;
5.0 Know the different types of adhesives for footwear;
6.0 Know the sequence of operation of footwear manufacture

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: PRODUCTION TECHNOLOGY I			Course Code: LFT 311		Contact Hours: 3 Hours/Week	
			Credit Unit: 3		Theoretical: 2 Hours/Week	
Year I	Semester I		Pre-requisite:		Practical: 1 Hour/Week	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: This course is designed to acquaint the students with the knowledge and skills of the production of footwear in the industry						
GENERAL OBJECTIVE 1.0: Understand the various departments in the footwear Production						
Week	THEORETICAL CONTENT			PRACTICAL CONTENT		
	Specific Learning Outcome	Teacher's Activities	Resources	Specific Learning Outcome	Teacher's Activities	Resources
1-2	1.1 Explain the footwear industry structure and the segments of the Footwear Industry. 1.2 Describe the roles of the Footwear Department: i Design, ii Production, iii Quality control & marketing 1.3 Classify the types of footwear: i Casual, ii formal, iii athletic, iv specialty shoes. 1.4 Discuss the global trends and market dynamics in footwear. 1.5 Explain the	• Describe the footwear industry structure and the segments of the footwear industry. • Describe the roles in Footwear department: design, production, quality control, marketing. • Classify the Types of footwear: casual, formal, athletic, special shoes. • Discuss the global trends and market dynamics in footwear • Explain the sustainability in Footwear. • Environmental	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	• Demonstrate footwear manufacturing process using relevant video clips.	Guide students to: • Watch video clips on the footwear manufacturing process. • Create a flowchart of the processes.	Video clips Charts Multimedia Projector, Other resources for creating flowcharts.

	sustainability of footwear: 1.6 Environmental considerations in production	considerations in production				
General Objective 2.0: Know the technicalities of Footwear						
3-4	2.1 Describe shoe anatomy: components like upper, sole, heel, lining. 2.2 Explain construction methods: goodyear welted, cementing, stitching, blake construction. 2.3 Describe the importance of lasts and lasting Techniques. 2.4 Explain upper preparation: cutting, skiving, stitching, shaping of uppers. 2.5 Describe methods of attaching the sole to the upper part.	• Discuss shoe anatomy: components like upper, sole, heel, lining. • Explain construction methods: goodyear welt, cementing, stitching, blake construction. • Describe lasting techniques: importance of lasts in shoe shaping. • Explain upper preparation: cutting, stitching, and shaping of uppers. • Describe sole attachment: methods of attaching soles to uppers.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	• Demonstrate Leather and sole flex endurance test. • Carry out Dissection experiment	Guide student to: • Use cutting tools for different shoe types, conduct the following: • Use Flexing Endurance Machine • Carry out sole attachment exercise	
General Objective 3.0: Understand machines and equipment for footwear						
5-7	3.1 Describe clicking machines. 3.2 Describe industrial	• Describe cutting machines: clicking machines for cutting	Textbooks, Encyclopaedia, E-books,	• Demonstrate logout and tag out drills.	Guide student to: 1. Carry out experiments on	Cutting machine, Stitching

	sewing machines for footwear. 3.3 Describe lasting machines for footwear. 3.4 Describe sole bonding equipment for adhesive application 3.5 Describe equipment/ tools for polishing and finishing footwear.	leather/ components. • Describe stitching machines: industrial sewing machines for footwear. • Describe lasting machines: equipment used to shape shoes on lasts. • Describe sole bonding equipment: machines for adhesive application and bonding. • Describe finishing equipment: tools for polishing, buffing, finishing shoes.	Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	• Carry out cutting of upper sectional components.	the operations of any of the following equipment: a. Clicking machines b. Skiving machines c. Industrial sewing machines d. Roughing machine e. Sole bonding machine.	machines, Sewing machine, Polishing machine, Skiving machine. n
General Objective 4.0: Understand the different types of soling materials.						
8-10	4.1 Explain the different types of natural sole materials, such as rubber and leather. 4.2 Explain the different types of synthetic sole materials, such as PU (Polyurethane) and EVA (Ethylene Vinyl Acetate). 4.3 Discuss sustainability in soling materials.	• Describe the different types of natural sole materials, such as rubber and leather. • Discuss the different types of synthetic sole materials, such as PU (Polyurethane) and EVA (Ethylene Vinyl Acetate). • Discuss	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	• Determination of the thicknesses of different soling materials. • Demonstrate the concept of sustainability in soling materials.	Guide students to: • Use a thickness-measuring device to measure the thickness of samples of different materials at multiple points and calculate the mean thickness and variance to	Thickness measuring device. Different out-sole samples etc.

		Sustainability in soling materials.			assess batch consistency.	
General Objective 5.0: Know the different types of adhesives for shoe making.						
11-12	5.1 Explain adhesives for sole bonding: a. Polyurethane (PU) Adhesives: Common for sole bonding. b. Neoprene Adhesives: Used for certain bonding applications. c. Hot Melt Adhesives: For specific footwear assembly processes. d. Water-based Adhesives: Considerations for eco-friendly options. 5.2 Discuss Application Techniques: Factors in applying adhesives for footwear. 5.3 Explain Safety and Regulations during adhesive application on footwear.	• Explain adhesives for sole bonding ▪ Polyurethane (PU) Adhesives: Common for sole bonding. ▪ Neoprene Adhesives: Used for certain bonding applications. ▪ Hot Melt Adhesives: For specific footwear assembly processes. ▪ Water-based Adhesives: Considerations for Eco-friendly options. • Discuss Application Techniques: Factors in applying adhesives for footwear. • Explain Safety and Regulations during adhesive application on footwear.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector etc	• Determine the effects of environmental factors on bonded samples. • Prepare Hybrid adhesives and determine the bonding efficiency.	Guide student to: • Conduct experiment on bonded samples using water immersion and heating ageing. • Investigate different properties of blended adhesive on footwear properties. • Blend different adhesives and study their behaviour.	Peeling testing machine, Oven, Water bath, Thermometer, Bonded samples etc.

General Objective 6.0: Know the sequence of operations in footwear manufacture.						
13-15	6.1 Describe how to design and make a pattern for footwear. 6.2 Describe the preparation of the upper and bottom components. 6.3 Explain the assembling and stitching of the upper parts. 6.4 Explain drafting and lasting of shoe. 6.5 Describe bonding or attaching sole to upper.	• Describe how to make designs and patterns for footwear. • Describe cutting upper materials and other components. • Explain the assembling and stitching of the upper parts. • Explain drafting and lasting of a shoe. • Describe bonding or attaching the sole to the upper.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector		Guide student to: • Provide different pairs of shoes with deliberate sequence-related defects. • Examine each defect and identify the incorrect step in the sequence. • Amend the shoe using the correct sequence.	Different defective pairs of shoes and all the equipment in the workshop.

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

COMPUTER-AIDED DESIGN (CAD)

<table>
<tr><td colspan="4">PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)</td></tr>
<tr><td colspan="2" rowspan="2">COURSE TITLE:
COMPUTER-AIDED DESIGN (CAD)</td><td>Course Code: LFT 312</td><td>Contact Hours: 3 Hours/Week</td></tr>
<tr><td>Credit Unit: 3</td><td>Theoretical: 1Hour/Week</td></tr>
<tr><td>Year I</td><td>Semester I</td><td>Pre-requisite:</td><td>Practical: 2 Hours/Week</td></tr>
<tr><td colspan="4">GOAL: This course is designed to acquaint students with Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM) for footwear production.</td></tr>
<tr><td colspan="4">GENERAL OBJECTIVES

On completion of this course, the students should be able to:
1.0 Understand the fundamentals of CAD/CAM
2.0 Know how to use CAD/CAM for footwear design and pattern making;
3.0 Comprehend 2D and 3D footwear modelling and shoe last modification;
4.0 Understand automated cutting, 3D printing, Computer Numerical Control (CNC) lasting and CAD/CAM integration.</td></tr>
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PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)					
COURSE TITLE: **COMPUTER AIDED DESIGN**			**Course Code: LFT 312**	**Contact Hours: 3 Hours/Week**	
			Credit Unit: 3	**Theoretical: 1 Hour/Week**	
Year I	**Semester I**		**Pre-requisite:**	**Practical: 2 Hours/Week**	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL					
GOAL: This course is designed to acquaint students with the knowledge of CAD/CAM for footwear production					
GENERAL OBJECTIVE 1.0: Understand the fundamentals of CAD and CAM					
Week	**THEORETICAL CONTENT**			**PRACTICAL CONTENT**	
	Specific Learning Outcome	**Teacher's Activities**	**Resources**	**Specific Learning Outcome**	**Teacher's Activities**	**Resources**
1-4	1.1 Explain the concept of CAD. 1.2 Explain the importance and applications of CAD. 1.3 Explain CAM software and its application in footwear production. 1.4 Explain the differences between footwear-specific CAD/CAM and generic mechanical CAD.	• Explain the concept of CAD. • Explain the importance and applications of CAD. • Explain CAM software and its application in footwear production. • Explain the differences between footwear-specific CAD/CAM and generic mechanical CAD.	Textbooks, E-books, Journals, Magazines, Video clips, Charts, Pictorials, Marker.	• Demonstrate simple application of CAD/CAM in specific footwear design	Guide students to carry out: • Application of specific footwear CAD/CAM (Shoemaster) in footwear design • Compare it with the design using mechanical CAD.	Computers installed with appropriate software such as Shoemaster and Mechanical CAD, practical manuals etc.
General Objective 2.0: Know how to use CAD for footwear design and pattern making						
5-8	2.1 Describe the application of 2D and basic drawing. 2.2 Describe 3D software design and tools in footwear. 2.3 Describe how to create	• Explain the application of 2D and basic drawing. • Describe 3D software design and tools in footwear. • Describe how to	Textbooks, E-books, Journals, Magazines, Video clips, Charts, Pictorials,	• Demonstrate the principle of 2D drawing and use of CAD for pattern modification in 3D	Guide students to: • Apply the principle of 2D drawing and use of CAD for pattern modification in	Computers equipped with appropriate software, such as Shoemaster

	and modify footwear patterns using CAD software. 2.4 Explain how to develop simple footwear designs using CAD software.	create and modify footwear patterns using CAD software. • Explain how to develop simple footwear designs using CAD software.	Marker.		3D	and Mechanical CAD, practical manuals, etc.
General Objective 3.0: Comprehend 2D and 3D footwear modelling and shoe last modification						
9-12	3.1 Discuss how to design different types of footwear using 2D and 3D. 3.2 Explain how to develop different types of footwear using the designed pattern in 3.1. 3.3 Describe how to create 2D footwear models and modify last digitally. 3.4 Describe how to create 3D footwear models and modify last digitally.	• Describe how to design different types of footwear using 2D and 3D. • Explain how to develop different types of footwear using the designed pattern in 3.1. • Explain how to create 2D footwear models and modify last digitally. • Describe how to create 3D footwear models and modify last digitally.	Textbooks, E-books, Journals, Magazines, Video clips, Charts, Pictorials, Marker.	• Carry out simple designs and modifications of the shoe last using CAD software. • Convert a 2D footwear design to 3D digitally.	Guide students to carry out: • Simple designs and modifications of the shoe last using CAD software. • Convert a 2D footwear design to 3D digitally.	Computers with appropriate software, i.e. Shoe master, 3D Printer, practical manuals, etc
Objective 4.0: Understand automated cutting, 3D printing, Computer Numerical Control (CNC) lasting and CAD/CAM integration						
13-15	4.1 Explain the application of CNC in automated cutting. 4.2 Explain the concept of 3D printing in footwear. 4.3 Describe how CAD/CAM integration can be used to improve	• Describe the application of CNC in automated cutting. • Explain the concept of 3D printing in footwear. • Explain how CAD/CAM	Textbooks, E-books, Journals, Magazines, Video clips, Charts, Pictorials, Marker.		• Demonstrate the incorporation of CAD/CAM into CNC in improved design and production efficiency of footwear	Computers with appropriate software, i.e. Shoe master, 3D Printer, practical manuals, etc.

	efficiency in footwear production.	integration can be used to improve efficiency in footwear production.				

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

MATERIAL TESTING I

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: MATERIAL TESTING I		**Course Code: LFT 313**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 2 Hours/Week**
Year I	**Semester I**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: This course is designed to enable the students to understand the requirements of the materials and components used in footwear manufacturing			
GENERAL OBJECTIVES **On completion of this course, the students should be able to:** 1.0 Know the physical and mechanical testing of footwear materials; 2.0 Understand comfort and performance testing; 3.0 Comprehend chemical and safety testing.			

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: MATERIALS TESTING I			**Course Code: LFT 313**		**Contact Hours: 3 Hours/Week**	
			Credit Unit: 3		**Theoretical: 2 Hours/Week**	
Year I	**Semester I**		**Pre-requisite:**		**Practical: 1 Hour/Week**	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: This course is designed to enable the students to understand the requirements of the materials and components used in footwear manufacturing.						
GENERAL OBJECTIVE 1.0: Know the Physical and Mechanical Testing of Footwear Materials						
Week	**THEORETICAL CONTENT**			**PRACTICAL CONTENT**		
	Specific Learning Outcome	**Teacher's Activities**	**Resources**	**Specific Learning Outcome**	**Teacher's Activities**	**Resources**
1-5	1.1 Discuss physical and mechanical testing methods for footwear materials and components standard, such as ASTM, ISO, EN, ARS, BS, NIS. 1.2 Discuss chemical testing methods for footwear materials and components standard, such as ASTM, ISO, EN, ARS, BS, NIS. 1.3 Describe the Abrasion Resistance of soles and uppers. 1.4 Describe Tear Strength. 1.5 Explain Flex Resistance. 1.6 Describe Impact Resistance. 1.7 Explain Slip Resistance.	• Discuss Physical and mechanical testing methods for footwear materials and components standard like ASTM, ISO, EN, ARS, BS, NIS. • Discuss chemical testing methods for footwear materials and components standard like ASTM, ISO, EN, ARS, BS, NIS. • Describe the Abrasion Resistance of soles and uppers. • Describe Tear Strength. • Explain Flex Resistance.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	Demonstrate: • Abrasion resistance tests, tear strength • Flex endurance test, • Traction and safety on various surfaces.	Guide students to carry out: • Experiment on: Abrasion resistance of outsole and upper materials. • Tear strength on upper materials. • Flex endurance test on upper and outsole materials. • Traction and safety on various surfaces.	Abrasion test equipment, Tear strength machine, Flex machine, Slip resistance equipment.

	1.7 Describe traction and safety on various surfaces.	• Describe Impact Resistance. • Explain Slip Resistance. • Describe traction and safety on various surfaces.				
General Objective 2.0: Understand Comfort and Performance Testing						
6-10	2.1 Describe water vapour permeability for assessing the breathability of footwear. 2.2 Explain water resistance and protection against water penetration. 2.3 Describe thermal properties of footwear materials. 2.4 Explain antistatic properties of footwear materials.	• Describe water vapour permeability for assessing the breathability of footwear. • Explain water resistance and protection against water penetration. • Describe the thermal properties of footwear materials. • Explain the antistatic properties of footwear materials.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	• Carry out a water vapour permeability test for upper • Carry out tests on internal properties of footwear materials	Guide students to carry out: • Water vapour permeability test for upper. • water resistance test on outsole and upper. • water absorption test on the upper Carry out a water vapour permeability test for the upper. • tests on internal properties of footwear materials.	Water vapour permeability equipment
General Objective 3.0: Comprehend Chemical and Safety Testing						
11-15	3.1 Explain the chemical composition of footwear materials. 3.2 Explain safety and regulatory compliance. 3.3 Discuss the toxicity and Safety of footwear	• Discuss the standards for footwear safety and environmental impact. • Explain chemical composition	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts,			

	materials. 3.4 Explain environmental sustainability of footwear materials. 3.5 Discuss the standards for footwear safety and environmental impact.	footwear materials. • Explain safety and regulatory compliance. • Discuss toxicity and safety of footwear materials. • Explain environmental sustainability of footwear materials. • Discuss the standards for footwear safety and environmental.	Markers, Multimedia projector			

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

PATTERN PRODUCTION I

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: PATTERN PRODUCTION I		**Course Code: LFT 314**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 2 Hours/Week**
Year I	**Semester I**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: This course is designed to equip the students with practical skills and knowledge in footwear pattern making.			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Know how to sketch and draw patterns for various footwear;
2.0 Understand the relationship between pattern making and pattern grading;
3.0 Comprehend the basic principles of setting patterns to fit;
4.0 Know the principle of hand clicking.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: PATTERN PRODUCTION I		Course Code: LFT 314	Contact Hours: 3 Hours/Week
		Credit Unit: 3	Theoretical: 2 Hours/Week
Year I	Semester I	Pre-requisite:	Practical: 1 Hour/Week
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL			
GOAL: This course is designed to equip the student with practical skills and knowledge in footwear pattern making.			
GENERAL OBJECTIVE 1.0: Know how to sketch and draw patterns for various footwear.			

Week	THEORETICAL CONTENT			PRACTICAL CONTENT		
	Specific Learning Outcome	Teacher's Activities	Resources	Specific Learning Outcome	Teacher's Activities	Resources
1-4	1.1 Explain pattern symbols and basic making techniques. 1.2 Explain the sequence of making patterns: a. Forme production b. Forme cutting c. Mean forme d. Standard e. Net pattern f. Working pattern g. Lining pattern h. Insole pattern 1.3 Explain the various methods of obtaining the forme (shell method, plaster of Paris (POP), computer method and masking tape method). 1.4 Describe how to draw a pattern to scale	• Explain pattern symbols and basic making techniques. • Explain the sequence of making patterns: ▪ Forms production ▪ Forme cutting ▪ Mean forme ▪ Standard ▪ Net pattern ▪ Working pattern ▪ Lining pattern • Explain the various methods of obtaining the forme (shell method, plaster of Paris (POP), computer method and masking tape method).	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	• Demonstrate taping, sectional pattern with their measurement. Forme production and Forme cutting	• Guide students to carry out: ▪ taping using shoe last ▪ forme cutting ▪ Mean forme production ▪ Standard production ▪ Net patterns production ▪ Lining patterns ▪ standard construction using all the necessary measurements • Prepare sectional patterns (upper, lining and insole patterns).	Shoe last Masking Tape, Cardboard, Cutting knife, Ruler, Pencil, Divider, Measuring instrument.

	on cardboard. 1.5 Describe how to design patterns for Gibson shoes, Oxford shoes, etc.	• Describe how to draw a pattern to scale on cardboard. • Describe how to design patterns for Gibson shoes, Oxford shoes etc.				
General Objective 2.0: Understand the relationship between pattern making and pattern grading.						
5-8	2.1 Explain footwear measuring instruments and their maintenance. 2.2 Explain the Processes, differences and methods used in pattern cutting and pattern grading. 2.3 Discuss the safety precautions involved in the use of the instruments as mentioned in 2.1. 2.4 Describe the grading of patterns into all sizes used in footwear manufacture. 2.5 Discuss the key aspects of foot structure relevant to footwear design.	• Explain footwear measuring instruments and their maintenance. • Explain the Processes, differences and methods used in pattern cutting and pattern grading. • Discuss the safety precautions involved in the use of the instruments. • Describe the grading of patterns into all sizes used in footwear manufacture. • Discuss key aspects of foot structure relevant to footwear design.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	• Carry out the grading of patterns into all sizes. • Demonstrate safety in use of footwear measuring instrument.	Guide students to carry out: • Grading of patterns across all sizes using grading machines and /or manually with grading instruments.	Grading Instruments, Cardboard Hardboard
General Objective 3.0: Comprehend the basic principles of setting patterns to fit.						
9-12	3.1 Explain how to design footwear to a	• Explain how to design footwear to a	Textbooks, Encyclopaedia,	• Demonstrate how to design	Guide students to carry out:	Cardboard Ruler

	standard. 3.2 Explain how to design footwear for the entire last to fit. 3.3 Describe how to produce working patterns. 3.4 Describe the production of the lining patterns. 3.5 Explain how to estimate the cost of materials based on selected patterns. 3.6 Explain how to transfer standard patterns to working patterns.	standard. • Explain how to design footwear for the entire last to fit. • Describe how to produce working patterns. • Describe the production of the lining patterns. • Describe how to estimate the cost of material based on selected patterns. • Describe how to transfer standard patterns to working patterns.	E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	footwear of the entire last to fit • Carry out cost analysis using standard patterns • Demonstrate production of lining pattern	• Experiment on how to design footwear of the entire last to fit. • Cost analysis using standard patterns.	Pencils Measuring instruments.
General Objective 4.0: Know the principle of hand clicking.						
13-15	4.1 Discuss safety precautions in the Clicking Department. 4.2 Explain principles of lines of stretchiness and tightness. 4.3 Discuss the principles of hand clicking and cutting on the line of tightness. 4.4 Explain how to select appropriate tools for hand cutting. 4.5 Explain how to place patterns on materials	• Discuss safety precautions in the clicking department. • Explain principles of lines of stretchiness and tightness. • Discuss the principles of hand clicking and cutting on the line of tightness • Describe how to select appropriate tools for hand	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	• Demonstrate safety precautions in the clicking department. • Demonstrate the principles of hand clicking and cutting on the line of tightness • Role Play place patterns on materials in an	Guide students to carry out: ▪ Safety precaution in clicking department. ▪ clicking manually and using the machine.	PPE, Clicking machine, Scissors Footwear materials Clicking knife. Clicking dies

	in an interlocking order to avoid waste during cutting.	cutting. • Describe how to place patterns on materials in an interlocking order to avoid waste during cutting.		interlocking order to avoid waste during cutting.		

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

FOOTWEAR GRAPHICS

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: FOOTWEAR GRAPHICS		**Course Code: LFT 315**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 1 Hour/Week**
Year I	**Semester I**	**Pre-requisite:**	**Practical: 2 Hours/Week**
GOAL: This course is designed to equip the students with the knowledge of the fundamentals of footwear graphics.			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Understand the foundations of footwear graphics;
2.0 Know the digital illustration and visualisation;
3.0 Comprehend the footwear presentation and portfolio;
4.0 Know the specialized footwear graphics.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: FOOTWEAR GRAPHICS			**Course Code: LFT 315**		**Contact Hours: 3 Hours/Week**	
			Credit Unit: 3		**Theoretical: 1 Hour/Week**	
Year I	**Semester I**		**Pre-requisite:**		**Practical: 2 Hours/Week**	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: This course is designed to equip the students with the fundamentals of footwear graphics.						
GENERAL OBJECTIVE 1.0: Understand the foundations of footwear graphics						
Week	**THEORETICAL CONTENT**			**PRACTICAL CONTENT**		
	Specific Learning Outcome	**Teacher's Activities**	**Resources**	**Specific Learning Outcome**	**Teacher's Activities**	**Resources**
1-3	1.1 Explain the basic elements and principles of design in leather products. 1.2 Explain the fundamentals of graphic design elements. 1.3 Describe how to use Digital Tools: Adobe Illustrator, CorelDraw, AutoCAD and Photoshop for footwear graphics.	• Explain the basic elements and principles of design in leather products. • Explain graphic design fundamentals, like colour theory, typography, and composition applied to footwear. • Describe how to use Digital Tools: Adobe Illustrator, CorelDraw, AutoCAD and Photoshop for footwear graphics.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers, Multimedia projector	• Demonstrate the use of sketches of leather products using AutoCAD, CorelDRAW, and Paint. • Create a repeating pattern/print.	Guide students to carry out: • Sketches of designs of leather products for graphical presentation. • Create a repeating pattern/print. • Apply selected sufficient for footwear graphics.	Cardboard HB Pencils. Computer installed with relevant software such as Photoshop, Illustrator, 3D+, etc.,
General Objective 2.0: Know the digital illustration and visualisation.						
3-6	2.1 Describe footwear illustration techniques. 2.2 Describe how 2D images can be converted into 3D	• Describe footwear illustration techniques: hand drawing and digital methods.	Textbooks, Encyclopaedia, E-books, Journals, Magazines,	• Convert 2D into 3D models and rendering using Rhino and Blender	Guide the student to: • Convert 2D into 3D models and rendering using	Cardboard HB Pencils. Computer installed with necessary

	modelling and rendering using software like Rhino and Blender for footwear visualisation. 2.3 Explain the texture and material representation of leather digitally.	• Describe how 2D images can be converted into 3D modelling and rendering using software like Rhino and Blender for footwear visualisation. • Explain the texture and material representation of leather digitally.	Video clips, Charts, Rhino and Blender software, Marker.	software. • Use software for the representation of leather.	Rhino and Blender software. • Use software for the representation of leather.	software such as Rhino and Blender.
General Objective 3.0: Comprehend the Footwear Presentation and Portfolio						
11-13	3.1 Explain current trends in footwear graphics. 3.2 Explain how to create pitching designs for industry stakeholder 3.3 Describe digital portfolio development showcasing footwear graphic designs.	• Explain current trends in footwear graphics. • Explain how to create pitching designs for industry stakeholder. • Describe digital portfolio development showcasing footwear graphic designs.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Design software for AutoCAD, CorelDraw, Paint and Marker.	• Identify and create pitching designs for industry stakeholders. • Demonstrate manual and digital portfolio development using appropriate design software.	Guide students to: • Create pitching designs for industry stakeholders. • Manually and digitally develop a Portfolio using appropriate design software.	Cardboard, HB Pencils. Computer installed with relevant software such as AutoCAD, CorelDraw, Photoshop, Illustrator, 3D+, etc.
General Objective 4.0: Know the Specialised Footwear Graphics						
14-15	4.1 Explain footwear design for performance shoes, such as athletic, orthopaedics and safety footwear. 4.2 Explain high-end graphic treatments for	• Explain footwear design for performance shoes, such as athletic, orthopaedics and safety footwear. • Explain high-end	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts,	• Identify design for athletic, orthopaedics and safety footwear. • Demonstrate high-end	Guide students to: • Carry out appropriate design for athletic, orthopaedics and safety	Cardboard, HB Pencils. Computer installed with necessary software such as Photoshop,

	luxury and fashion footwear. 4.3 Discuss environment-friendly approaches in footwear design.	graphic treatments for luxury and fashion footwear. • Discuss environment-friendly approaches in footwear design.	Marker.	graphic treatments for luxury and fashion footwear in an environmental-friendly manner	footwear. • Conduct high-end graphic treatments for luxury and fashion footwear in an environmental-friendly manner	Illustrator, 3D+, etc.

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

FOOTWEAR ACCESSORIES TECHNOLOGY

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: FOOTWEAR ACCESSORIES TECHNOLOGY		**Course Code: LFT 316**	**Contact Hours: 2 Hours/Week**
		Credit Unit: 2	**Theoretical: 2 Hours/Week**
Year I	**Semester I**	**Pre-requisite:**	**Practical: 0**
GOAL: This course is designed to acquaint students with innovative footwear accessories			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Know the different types of accessories and their role in footwear design and manufacture;
2.0 Know different types of materials used for making footwear accessories;
3.0 Understand design principles for footwear accessories;
4.0 Understand the processes of making accessories and their integration into footwear;
5.0 Know current innovations and trends in footwear accessories.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: FOOTWEAR ACCESSORIES TECHNOLOGY			Course Code: LFT 316		Contact Hours: 2 Hours/Week	
			Credit Unit: 2		Theoretical: 2 Hours/Week	
Year I	Semester I		Pre-requisite:		Practical: 0	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: This course is designed to acquaint students with innovative footwear accessories						
GENERAL OBJECTIVE 1.0: Know the different types of accessories and their role in footwear design and manufacture						
Week	THEORETICAL CONTENT			PRACTICAL CONTENT		
	Specific Learning Outcome	Teacher's Activities	Resources	Specific Learning Outcome	Teacher's Activities	Resources
1-3	1.1 Explain different types of footwear accessories, e.g. buckles, lace, eyelet, trims and decorative elements. 1.2 Discuss types of materials used for making footwear accessories, e.g. brass, stainless steel, zinc, plastic, leather and synthetic. 1.3 Discuss the important roles of accessories in footwear design and manufacture (i.e. functional and decorative roles). 1.4 Explain the principles of accessory design; consideration for style, durability, and compatibility.	• Explain different types of footwear accessories, e.g. buckles, lace, eyelet, trims and decorative elements. • Discuss types of materials used for making footwear accessories, e.g. brass, stainless steel, zinc, plastic, leather and synthetic. • Discuss the important roles of accessories in footwear design and manufacture (i.e. functional and decorative roles). • Explain the principles of accessory design;	E-book, Books, Journals, Magazines, Video clips, Charts, Markers, etc			

		consideration for style, durability, and compatibility.				
General Objective 2.0: Know different types of materials used for making footwear accessories						
4-6	2.1 Explain types of metals and hardware used for buckles and fittings, e.g. brass, stainless steel and zinc. 2.2 Discuss types of plastic and synthetic materials used for footwear accessories such as lace, eyelets and trims. 2.3 Explain the use of leather and textile for accessories, e.g. straps and cords.	• Explain types of metals and hardware used for buckles and fittings e.g. brass, stainless steel and zinc. • Discuss types of plastic and synthetic materials used for footwear accessories such as lace, eyelets and trims. • Describe how leather and textiles are used for accessories, e.g. leather straps, cords and decorative elements.	E-books, Books, Journals, Magazines, Video clips, Charts, Markers.			
General Objective 3.0: Understand the design principles for footwear accessories						
7-9	3.1 Discuss design principles of footwear accessories, consideration for style, durability and compatibility. 3.2 Explain different types of buckles, toggles and fitting designs. 3.3 Explain functional and	• Discuss design principles of footwear accessories, consideration for style, durability and compatibility. • Explain different types of buckles, toggles and fitting	E-books, Books, Journals, Magazines, Video clips, Charts, Marker**.**			

	decorative aspects of laces and cords. 3.4 Discuss the use of Trims and embellishments in footwear design and manufacture.	designs. • Explain functional and decorative aspects of laces and cords. • Discuss the use of Trims and embellishments in footwear design and manufacture.				
General Objective 4.0: Understand the processes of making accessories and their integration into footwear						
10-12	4.1 Explain Leather working techniques for accessories: cutting, shaping and finishing. 4.2 Explain metalworking techniques for accessories: casting, stamping and finishing. 4.3 Explain the methods involved in making plastic accessories such as moulding and fabrication. 4.4 Explain how accessories are assembled and attached to footwear.	• Explain Leather working techniques for accessories: cutting, shaping and finishing. • Explain metalworking techniques for accessories: casting, stamping and finishing. • Explain the methods involved in making plastic accessories such as moulding and fabrication. • Explain how accessories are assembled and attached to footwear.	E-books, Books, Journals, Magazines, Video clips, Charts, Marker**.**			
General Objective 5.0: Know current innovations and trends in footwear accessories						
13-15	5.1 Explain the Current trends in accessories,	• Explain the Current trends in	Textbooks, Encyclopaedia,			

	fashion and functional trends influencing footwear design. 5.2 Explain new innovations and technologies in the design and use of materials for accessories. 5.3 Explain sustainability in accessories; Eco-friendly practices and materials.	accessories, fashion and functional trends influencing footwear design. • Explain new innovations and technologies in the design and use of materials for accessories. • Explain sustainability in accessories; Eco-friendly practices and materials.	E-books, Journals, Magazines, Video clips, Charts, Marker, Multimedia Projector.			

COURSE ASSESSMENT

COURSE WORK:	20%
TESTS	20%
EXAMINATION	60%
TOTAL	**100%**

YEAR I: SEMESTER II

PRODUCTION TECHNOLOGY II

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: PRODUCTION TECHNOLOGY II		**Course Code: LFT 321**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 2 Hours/Week**
Year I	**Semester II**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: This course is designed to enable the students to acquire knowledge of footwear fabrication, product development and specialised footwear production.			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Comprehend the fundamentals of footwear manufacturing processes;
2.0 Understand footwear production techniques and applications;
3.0 Know types of accessories and their roles in footwear design and production;
4.0 Understand specialised footwear production;
5.0 Know footwear production management.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)					
COURSE TITLE: PRODUCTION TECHNOLOGY II		**Course Code: LFT 321**		**Contact Hours: 3 Hours/Week**	
		Credit Unit: 3		**Theoretical: 2 Hours/Week**	
Year I Semester II		**Pre-requisite:**		**Practical: 1 Hour/Week**	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL					
GOAL: This course is designed to enable the students to acquire knowledge of footwear fabrication, product development and specialised footwear production.					
GENERAL OBJECTIVE 1.0: Comprehend fundamentals of footwear manufacturing processes					
Week	**THEORETICAL CONTENT**			**PRACTICAL CONTENT**	
	Specific Learning Outcome	**Teacher's Activities**	**Resources**	**Specific Learning Outcome**	**Teacher's Activities**	**Resources**
1-3	1.1 Discuss cutting, stitching and lasting techniques. 1.2 Describe sole attachment methods. 1.3 Explain fundamental of footwear assembly techniques.	• Discuss cutting, stitching, and lasting techniques. • Group students to handle cutting, stitching and lasting activities. Upon completion of this stage, adopt role-play group activities and compare results. • Conceptualise sole attachment methods while imbibing knowledge of fundamental footwear assembly techniques. The group assignment approach is useful here.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers.	• Carry out cutting, stitching and lasting of footwear. • Carry out sole attachment method. • Demonstrate footwear assembly techniques on samples.	Guide students to: • Conduct experiments on cutting, stitching and lasting of footwear. • Establish mastery of sole attachment method and footwear assembly technique	Sewing machine, Leather, synthetic and fabric materials Shoe last, measuring device, Lasting machines, Sole attaching machine, Clicking machine, Lasting pincer, Tack nails
General Objective 2.0: Understand Footwear Production Techniques and Applications						

5-8	2.1 Discuss common construction techniques (cemented, stitch-down and Goodyear, stuck-on, Veldtschoen, injection moulding, welted construction). 2.2 Discuss the advantages and limitations of methods in 2.1. 2.3 Discuss the impact on footwear performance.	• Describe the common construction techniques. • Identify all the known construction techniques and do a comparative analysis on student grouping format. • Link the advantages and limitations of construction techniques on footwear performance.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Mark er s	• Carry out construction of footwear using cemented, stitched down, Veldtschoen, Welted, and Goodyear methods. • Carry out the construction of footwear while investigating the effects of adopted techniques on performance.	Guide students to carry out experiments on: • Construction of footwear using cemented, stitched down, Veldtschoen, Welted, and Goodyear methods. • The effect of construction techniques on footwear performance.	Sewing machine, Leather synthetic and fabric materials, Last Measuring device, Lasting machines, Sole attaching machine, Clicking machine, Lasting pincer, Tack nails.
General Objective 3.0: Know types of accessories and their roles in footwear design and production						
7-9	3.1 Discuss production techniques for athletic/sports footwear. 3.2 Discuss production techniques for safety footwear. 3.3 Discuss production techniques for bespoke/custom	• Describe production techniques for athletic/sports footwear. • Conceptualise the production techniques for safety footwear. • Describe production techniques for bespoke/custom footwear.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers	• Carry out design and production of athletic/sport footwear, safety footwear or bespoke footwear.	Guide students to: • Conduct experiments on the design and production of athletic/sport footwear, safety footwear, or bespoke footwear.	Sewing machine, Leather synthetic, and fabric materials, Shoe last, Measuring instrument, Lasting machines, Sole

	footwear.	• Create a discussion group of students to apply the aforementioned methods in the production of specific footwear.				attaching machine, Clicking machine, Lasting pincer, Tack nails, Skiving machine.
General Objective 4.0: Understand Specialised Footwear Production						
10-12	4.1 Explain types of footwear accessories and decorative elements. 4.2 Discuss types of materials used for making footwear accessories. 4.3 Discuss the roles of accessories in footwear design and manufacture, such as functional and decorative roles. 4.4 Explain the principles of accessories based on styles, durability and	• Describe and identify types of footwear assesses such as buckles, lace, eyelet, trims and decorative elements. • Identify and describe types of materials used for making footwear accessories, such as brass, stainless steel, zinc, plastic, leather and synthetic. • Describe the roles of accessories in footwear design and manufacture, such as functional and decorative roles. • Describe the principles of accessories based on styles, durability and	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers	• Carry out design of classic footwear with functional and decorative accessories embedded.	Guide students to: • Conduct experiment on design of a classic footwear with functional and decorative accessories embedded.	Shoes last, Different accessories, Punch, Cardboard paper Measuring instruments etc

	compatibility.	compatibility.				
General Objective 5.0: Know Footwear Production Management						
13-15	5.1 Explain footwear production planning and management. 5.2 Explain efficiency improvement strategies in footwear production. 5.3 Discuss the supply chain in footwear production.	• Conceptualise the production planning and management for footwear. • Identify the efficiency improvement strategies in footwear production. • Describe the supply chain in footwear production.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers	• Improve product quality, reduce material waste, or shorten production time for specific components	Guide the student to: • Produce a batch of shoe uppers using manual and automated methods. • Compare production time, waste and cost per unit.	Sewing machine Leather, synthetic, and fabric materials Shoe last Measuring instrument Lasting machines Sole attaching machine Clicking machine Lasting pincer Tack nails.

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

MATERIALS TESTING II

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: MATERIALS TESTING II		**Course Code: LFT 322**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 2 Hours/Week**
Year I	**Semester II**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: The course is designed to acquaint the students with material test methods and analysis			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Know the essential and general requirements for components for footwear: stiffeners and toe puffs, heels and top pieces;
2.0 Understand essential requirements for certain types of footwear;
3.0 Comprehend critical substances potentially present in footwear and footwear components;
4.0 Know test methods and requirements for adhesives for leather and footwear materials.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: MATERIALS TESTING II			**Course Code: LFT 322**		**Contact Hours: 3 Hours/Week**	
			Credit Unit: 3		**Theoretical: 2 Hours/Week**	
Year I	**Semester II**		**Pre-requisite:**		**Practical: 1 Hour/Week**	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: The course is designed to acquaint the students with material test methods and analysis						
GENERAL OBJECTIVE 1.0: Know essential and general requirements for components for footwear: stiffeners and toe puffs, heels and top pieces.						
Week	**THEORETICAL CONTENT**			**PRACTICAL CONTENT**		
	Specific Learning Outcome	**Teacher's Activities**	**Resources**	**Specific Learning Outcome**	**Teacher's Activities**	**Resources**
1-4	1.1 Discuss the essential components for footwear. 1.2 Explain the mechanical characteristics of the components of the aforementioned footwear. 1.3 Explain the physical test for assessing the properties of the components mentioned 1.1.	• Describe the essential components for footwear, such as stiffeners, toe puffs, heels and top pieces. • Describe the mechanical characteristics of the components of footwear, such as stiffeners, toe puffs, heels and top pieces. • Explain the physical test for assessing the properties of the components listed in 1.1.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers	• Carry out the following test with regard to the components of footwear: ▪ Shape retention ▪ Compression strength ▪ Heel pin holding strength ▪ Slip resistance.	• Guide students to conduct tests and compare findings with standards for the following: ▪ Shape retention ▪ Compression strength ▪ Heel pin holding strength ▪ Slip resistance.	Tensile strength, testing machine, Slip resistance equipment, Leather samples of toe puffs, shoe heels and top pieces
General Objective 2.0: Understand essential requirements for certain types of footwear						

5-7	2.1 Discuss general and essential requirements for school footwear. 2.2 Discuss general and essential requirements for Casual footwear. 2.3 Discuss general and essential requirements for general sport footwear.	•Describe general and essential requirements for school footwear. •Itemise general and essential requirements for casual footwear. •Explain the general and essential requirements for general sport footwear. •Group the students to compare and find overlapping requirements for footwear, irrespective of the types considered.	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers	• Carry out essential physical tests such as flexing endurance, tensile strength, water vapour permeability for school footwear, casual footwear and general sport footwear.	Guide students to carry out • Essential physical tests such as flexing endurance, tensile strength, water vapour permeability for school footwear, casual footwear and general sport footwear. • Data interpretation and comparative analysis for optimal decision making	Tensile strength testing machine Slip resistance equipment Leather samples of toe puffs, shoe heels and top pieces
General Objective 3.0: Comprehend critical substances potentially present in footwear and footwear components						
8-12	3.1 Describe chemical substances that are potentially present in footwear and footwear components. 3.2 Explain chemical substances that are obnoxious in nature, influencing the wearer/user and the environment. 3.3 Explain test methods	• Identify and categorise all chemical substances potentially present in footwear and footwear components. • Understudy all chemical substances in footwear or footwear	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers	• Carry out chemical tests to determine critical substances potentially present in footwear and footwear components, such as heavy metals (chromium,	Guide students to: • Carry out chemical tests to determine critical substances potentially present in footwear and footwear components, such as heavy metals (chromium, iron, copper, mercury) and substances like chemical	Equipment (e.g. AAS, ICP, XRF) apparatus and reagents for chemical analysis

	for determining critical substances potentially present in footwear and footwear components.	components and establish their effect on the wearer/user and the environment. • Describe test methods for determining critical substances potentially present in footwear and footwear components.		iron, copper, mercury) and substances like chemical components of dyes. • Describe methods of determining the presence of heavy metals, e.g., AAS, ICP, XRF, etc., in footwear and footwear components.	components of dyes.	
General Objective 4.0: Know test methods and requirements for adhesives for leather and footwear materials						
13-15	4.1 Discuss the properties of footwear adhesives. 4.2 Explain test methods to determine adhesives properties. 4.3 Explain how to determine the optimum activation temperature of adhesives for leather and other footwear materials. 4.4 Explain how to determine maximum activation life of adhesives for leather and other footwear	•Identify and describe the properties of footwear adhesives. •Explain and enumerate test methods to determine adhesives properties. •Describe how to determine the optimum activation temperature of adhesives for leather and footwear materials, irrespective of the microclimatic	Textbooks, Encyclopaedia, E-books, Journals, Magazines, Video clips, Charts, Markers	• Carry out physical tests to determine relevant properties of adhesives such as bonding strength. • Determine optimum activation temperature of adhesives.	• Guide students to Conduct experiment using standards on: ▪ Lap Shear, ▪ Strength Test, ▪ Peel Test, ▪ Tack Test, ▪ Probe Tack, ▪ Creep Test, ▪ Environmental Durability Tests (for aging). • Determine optimum activation temperature of adhesives using DOE.	Equipment, apparatus and reagents for chemical analysis, Bonding test equipment, Different types of adhesives, Footwear materials such as leather, synthetic and fabric. Necessary software for

	materials.	conditions. • Describe the concept of the determination of the maximum activation life of adhesives for leather and footwear materials.				data generation and analysis

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

PATTERN GRADING

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: PATTERN GRADING		**Course Code: LFT 323**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 2 Hours/Week**
Year I	**Semester II**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: The course is to acquaint the students with pattern grading as applicable in the footwear industry			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Understand the Principles of Footwear Pattern Grading;
2.0 Comprehend techniques and methods of pattern grading for different footwear categories;
3.0 Appreciate Advanced and Custom Grading Application.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: PATTERN GRADING			Course Code: LFT 323		Contact Hours: 3 Hours/Week	
			Credit Unit: 3		Theoretical: 2 Hours/Week	
Year I	Semester II		Pre-requisite:		Practical: 1 Hour/Week	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: The course is to acquaint the students with pattern grading as applicable in the footwear industry						
GENERAL OBJECTIVE 1.0: Understand the Principles of Footwear Pattern Grading						
Week	THEORETICAL CONTENT			PRACTICAL CONTENT		
	Specific Learning Outcome	Teacher's Activities	Resources	Specific Learning Outcome	Teacher's Activities	Resources
1-4	1.1 Discuss the fundamentals of footwear sizing and grading. 1.2 Discuss key components of footwear that require pattern grading. 1.3 Discuss the importance of fit in footwear pattern grading.	• Describe the fundamentals of footwear sizing and grading. • Identify key components of footwear that require pattern grading. • Explain the importance of fit in footwear pattern grading.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Markers	•Carry out scope defining and participant selection for data collection on population, sample size calculation and inclusion/ exclusion criteria. •Carry out design data collection protocol by: ▪ Identifying key foot dimensions, ▪ Selecting measurement tools and ▪ Standardising the measurement procedure.	• Guide the student to: master the transformation of raw data/ measurements into a usable size chart using the Regression-Based Method	Computer, Microsoft Office, Statistica, design expert, Pantograph grading equipment, Measuring tape, Ruler, Divider.

General Objective 2.0: Comprehend techniques and methods of pattern grading for different footwear categories						
5-11	2.1 Discuss manual and computer-aided pattern grading techniques. 2.2 Explain grading rules for size and width adjustments. 2.3 Discuss the importance of footwear lasts on pattern grading. 2.4 Discuss pattern grading nuances for men, women and children's footwear. 2.5 Discuss pattern grading for athletic, formal and speciality footwear. 2.6 Discuss width grading and fit objectives. 2.7 Describe pattern grading for footwear fit and comfort. 2.8 Discuss anthropometric data for grading decisions. 2.9 Discuss graded patterns via fit testing.	• Describe manual and computer-aided pattern grading techniques. • Itemise and describe grading rules for size and width adjustments. • Describe the importance of footwear lasts on pattern grading. • Describe the pattern grading nuances for men's, women's and children's footwear. • Explain pattern grading for athletic, formal and speciality footwear. • Elaborate on width grading and fit Objectives. • Describe pattern grading for footwear fit and comfort. • Describe anthropometric	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Markers	•Carry out pattern grading for different types of footwear. •Demonstrate grading rules for size and width adjustment. •Elaborate on anthropometric date.	Guide students to carry out: • Pattern grading for different types of footwear using: a. Manual technique b. CAD Technique. • Comparative attribute analysis between the two techniques.	Computers with appropriate software installed, Cardboard paper, Shoe last; Footwear grading equipment, Measuring instruments.

		data for grading decisions. • Explain graded patterns via fit testing.				
General Objective 3.0: Appreciate Advanced and Custom Grading Application						
12-15	3.1 Explain advanced and custom grading techniques. 3.2 Discuss custom and bespoke pattern grading techniques. 3.3 Explain pattern grading in the mass customisation context. 3.4 Discuss industrial practices in footwear pattern grading.	• Explain advanced and custom grading techniques. • Discuss custom and bespoke pattern grading techniques. • Describe pattern grading in mass customisation contexts. • Describe industrial practices in footwear pattern grading.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Markers	• Demonstrate how to efficiently and accurately generate patterns that fit an individual's unique foot dimensions and shape preferences. Unlike traditional grading, which applies fixed increments to a base size, mass customisation grading must be data-driven and flexible.	Guide the student to: • Conduct experiments on the comparative performance of a novel "auto-grading" or "intelligent" pattern generation system and manual techniques.	Data Acquisition-3D Foot Scanner, Pattern Design & Grading-Footwear-Specific CAD Software, Prototype Manufacturing-CAD/CAM Output Devices Fit & Performance Evaluation-In-Shoe Pressure Measurement System, Data Analysis-

						Statistical Software, Computer, Microsoft Office, Statistica, design expert, Pantograph grading equipment, Measuring tape, Ruler, Divider.

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

FOOTWEAR FASHION DESIGN

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: FOOTWEAR FASHION DESIGN		**Course Code: LFT 324**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 2 Hours/Week**
Year I	**Semester II**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: The course is designed to acquaint the students with footwear fashion design.			
GENERAL OBJECTIVES **On completion of this course, the students should be able to:** 1.0 Understand the concept and scope of fashion design in footwear; 2.0 Know the elements and principles of design in footwear fashion; 3.0 Appreciate fashion trends in footwear designs; 4.0 Know the appropriate materials for footwear design.			

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: FOOTWEAR FASHION DESIGN			Course Code: LFT 324		Contact Hours: 3 Hours/Week	
			Credit Unit: 3		Theoretical: 2 Hours/Week	
Year I	Semester II		Pre-requisite:		Practical: 1 Hour/Week	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: The course is designed to acquaint the students with footwear fashion design.						
GENERAL OBJECTIVE 1.0: Understand the concept and scope of fashion design in footwear.						
Week	THEORETICAL CONTENT			PRACTICAL CONTENT		
	Specific Learning Outcome	Teacher's Activities	Resources	Specific Learning Outcome	Teacher's Activities	Resources
1-3	1.1 Explain fashion design in the footwear industry. 1.2 Discuss fashion accessories in relation to Footwear. 1.3 Discuss footwear fashion trends and forecasting.	• Discuss fashion design in the footwear industry. • Describe fashion accessories in relation to Footwear. • Describe footwear fashion trends and forecasting.	E-books, Textbooks, Illustrations, Projector, Journals, Magazines, Video clips, Charts, Marker.			
General Objective 2.0: Know the elements and principles of design in footwear fashion.						
4-7	2.1 Explain the elements of design in footwear fashion. 2.2 Explain the application of elements of design in footwear fashion. 2.3 Describe the principles of design and how they influence footwear aesthetics.	• Describe the elements of design in footwear fashion. • Discuss the application of elements of design in footwear fashion. • Explain principles of design influences footwear aesthetics.	Footwear Sketch templates, Drawing sheets, Books, E-books, Illustrations, Projector, Journals, Magazines, Video clips, Charts, Marker.	1. Identify the elements of design used in footwear fashion.	Guide students to: • Investigate and categorize on priority levels, the element of design used in footwear fashion. • Demonstrate how the principles of design influences	Pastel colours Water-colours Marker Cardboard.

					footwear aesthetics.	
General Objective 3.0: Appreciate fashion trends in footwear designs.						
8-11	3.1 Discuss how to prepare and present a footwear design portfolio. 3.2 Discuss footwear fashion designs as a target for markets. 3.3 Explain how trends facilitate footwear fashion.	• Describe the process of preparation and presentation of a footwear design portfolio. • Present footwear fashion designs as target for markets. • Describe how trends facilitate in footwear fashion.	E-books, Textbooks, Illustrations, Projector, Journals, Magazines, Video clips, Charts, Marker.	• Carry out footwear design portfolio. • Identify market and end-user desire for footwear fashion.	Guide students to: • Carry out footwear design portfolio. • Conduct market survey and use data generated in footwear design portfolio.	Pastel colours Water colours Marker Cardboard. Participants and end-users
General Objective 4.0: Know the appropriate materials for footwear design.						
12-15	4.1 Explain the appropriate materials and their uses in footwear design based on quality and durability. 4.2 Explain the importance of sustainability and durability in fashion material selection. 4.3 Discuss sustainability in fashion materials.	• Describe the essential materials and their uses in footwear design based on quality and durability. • Discuss the importance of sustainability and durability in fashion material selection. • Explain sustainability in fashion materials.	E-books, Textbooks, Projector, Journals, Magazines, Video clips, Charts, Marker.	• Demonstrate skill in footwear designs from sketches and illustrations. • Carry out footwear fashion designs using sustainable materials.	Guide students to: • Develop footwear designs from sketches and illustrations. • Carry out footwear fashion designs using sustainable materials.	Leather materials, Scissors Cutters Sketchpads Pastel colours Water colours Marker Cardboard.

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

YEAR II: SEMESTER I

PATTERN PRODUCTION II

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: PATTERN PRODUCTION II		**Course Code: LFT 411**	**Contact Hours: 2 Hours/Week**
		Credit Unit: 2	**Theoretical: 1 Hours/Week**
Year II	**Semester I**	**Pre-requisite: LFT 314**	**Practical: 1 Hour/Week**
GOAL: This course is designed to acquaint the students with pattern components and the related cutting techniques.			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Know the production of upper pattern components;
2.0 Understand upper pattern components;
3.0 Comprehend the design and production of patterns for outsole, insole and heel;
4.0 Know pattern cutting techniques.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: PATTERN PRODUCTION II			Course Code: LFT 411		Contact Hours: 2 Hours/Week	
			Credit Unit: 2		Theoretical: 1 Hour/Week	
Year II	Semester I		Pre-requisite: PATTERN PRODUCTION I		Practical: 1 Hour/Week	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: This course is designed to acquaint the students with pattern components and related cutting techniques.						
GENERAL OBJECTIVE 1.0: Know the production of upper pattern components						
Week	THEORETICAL CONTENT			PRACTICAL CONTENT		
	Specific Learning Outcome	Teacher's Activities	Resources	Specific Learning Outcome	Teacher's Activities	Resources
1-4	1.1 Discuss types, design and importance of lasts in pattern making. 1.2 Explain how to create or adapt a shoe last for footwear design and manufacture. 1.3 Describe how to produce patterns for football boots using selected shoe last.	• Discuss types, design and importance of lasts in pattern making. • Explain how to create or adapt a shoe last for footwear design and manufacture. • Describe how to produce footwear patterns for football boots using selected shoe last.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc	• Demonstrate the production of patterns for Sport footwear e.g. football boots.	Guide students to: • Carry out production of patterns for e.g. football boots.	Last Cardboard Measuring instruments Cutting knives Scissors etc
General Objective 2.0: Understand upper pattern components						
5-8	2.1 Discuss the methods of pattern cutting for vamp, quarters, back strap, counter, tongue and toe cap. 2.2 Discuss the methods of pattern cutting for	• Discuss the methods of pattern cutting for vamp, quarters, back strap, counter, tongue and toe cap. • Discuss the methods of pattern cutting for	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc	• Identify pattern cutting for upper sections, lining and reinforcement.	Guide students to: • Carry out pattern cutting for upper sections, lining and reinforcement.	Last Cardboard Measuring instruments Cutting knives Scissors

	lining components. 2.3 Discuss the methods of pattern cutting for reinforcement patterns.	lining components. • Discuss the methods of pattern cutting for reinforcement patterns.				
General Objective 3.0: Comprehend the design and production of patterns for outsole, insole and heel						
8-11	3.1 Discuss how to make patterns for the outsole 3.2 Discuss how to make patterns for the insole 3.3 Discuss how to make patterns for the heel.	• Describe how to make patterns for the outsole. • Describe how to make patterns for the insole. • Describe how to make patterns for the heel.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc	• Demonstrate the production of footwear patterns for outsole, insole and heel.	Guide students to: • Carry out production of footwear patterns for outsole, insole and heel.	Last Cardboard pencil Measuring instruments Cutting knives Scissors
General Objective 4.0: Know pattern-cutting techniques.						
12-15	4.1 Describe methods for cutting upper patterns. 4.2 Describe methods for cutting lining patterns. 4.3 Describe methods for cutting insole patterns.	• Describe methods for cutting upper patterns. • Describe methods for cutting lining patterns. • Describe methods for cutting insole patterns.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc	• Carry out pattern cutting for upper, lining and insole.	Guide students to: • Conduct experiments on Pattern cutting for upper, lining and insole.	Last Cardboard pencil Measuring instruments Cutting knives Scissors

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

BESPOKE FOOTWEAR DESIGN

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: BESPOKE FOOTWEAR DESIGN		**Course Code: LFT 412**	**Contact Hours: 2 Hours/Week**
		Credit Unit: 2	**Theoretical: 1 Hour/Week**
Year II	**Semester I**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: This course is designed to acquaint the students with designing and making of customised footwear.			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Understand the basic concepts of bespoke footwear;
2.0 Comprehend Bespoke production cycle;
3.0 Know the design and pattern development for bespoke footwear;
4.0 Understand designer-client relationship.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)					
COURSE TITLE: BESPOKE FOOTWEAR DESIGN			Course Code: LFT 412	Contact Hours: 2 Hours/Week	
			Credit Unit: 2	Theoretical: 1 Hours/Week	
Year II	Semester I		Pre-requisite:	Practical: 1 Hour/Week	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL					
GOAL: This course is designed to acquaint the student with designing and making of customised footwear.					
GENERAL OBJECTIVE 1.0: Understand the basic concepts of bespoke footwear					
Week	THEORETICAL CONTENT			PRACTICAL CONTENT	
	Specific Learning Outcome	Teacher's Activities	Resources	Specific Learning Outcome	Teacher's Activities	Resources
1-2	1.1 Explain bespoke footwear. 1.2 Discuss the principles and craftsmanship of bespoke shoes. 1.3 Discuss the key aspects influencing bespoke fit and comfort, such as foot anatomy and biomechanics.	• Describe bespoke footwear. • Describe the principles and craftsmanship of bespoke shoes. • Highlight the key aspects influencing bespoke fit and comfort, such as foot anatomy and biomechanics.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc			
General Objective 2.0: Demonstrate Bespoke production cycle						
3-7	2.1 Explain the types, styles and functions of bespoke footwear. 2.2 Explain how to make or select and modify appropriate last for bespoke footwear. 2.3 Explain how to select appropriate materials for bespoke footwear.	• Discuss the types, styles and functions of bespoke footwear. • Describe how to make or select/modify appropriate last for bespoke footwear. • Discuss how to select appropriate materials	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc	• Demonstrate how to design and make bespoke footwear on person with lower limp discrepancy and club foot. • Carry out	Guide students to: • Design and make bespoke footwear for a person with lower limb discrepancy and club foot. • Conduct experiments on	Shoe last Cardboard Measuring instruments Leather Fabric Cutting instruments Hand file Abrasive

	2.4 Describe the techniques for making bespoke footwear.	for bespoke footwear. • Describe the techniques for making bespoke footwear.		manual last modification.	manual last modification.	paper
General Objective 3.0: Know the design and pattern development for bespoke						
8-12	3.1 Discuss bespoke design principle (aesthetic, functionality and personalisation). 3.2 Describe pattern making for bespoke (creating custom patterns for upper and lining). 3.3 Describe pattern making for bespoke (creating custom patterns for insole and outsole components).	• Discuss bespoke design principle (aesthetic, functionality and personalisation). • Describe pattern making for bespoke (creating custom patterns for upper and lining). • Describe pattern making for bespoke (creating custom patterns for insole and outsole components).	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc	▪ Carry out pattern making for bespoke footwear.	Guide students to: • Carry out pattern making for bespoke footwear.	Shoe last Cardboard Measuring instruments Leather Fabric Pencil Marker Cutting instruments Hand file Abrasive paper
General Objective 4.0: Understand the designer-client relationship						
13-15	4.1 Discuss how to communicate and interact effectively with clients for bespoke footwear orders. 4.2 Explain how to transform a client's preference into a bespoke design. 4.3 Explain how to handle a client's feedback.	• Discuss how to communicate and interact effectively with clients for bespoke orders. • Describe how to transform a client's preference into a bespoke design. • Describe how to handle a client's	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc			

		feedback.				

COURSE ASSESSMENT

COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

FOOTWEAR DESIGN PRESENTATION

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: FOOTWEAR DESIGN PRESENTATION		**Course Code: LFT 413**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 2 Hours/Week**
Year II	**Semester I**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: This course is designed to acquaint the students with effective communication skills to showcase footwear design concepts to industry stakeholders			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Understand the elements of footwear design presentation;
2.0 Know how to apply design principles to create a presentation board;
3.0 Understand how to develop footwear design collections using inspirational elements;
4.0 Appreciate how to make footwear prototype;
5.0 Know how to make a presentation to industry stakeholders.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: FOOTWEAR DESIGN PRESENTATION			**Course Code: LFT 413**		**Contact Hours: 3 Hours/Week**	
			Credit Unit: 3		**Theoretical: 2 Hours/Week**	
Year II	**Semester I**		**Pre-requisite:**		**Practical: 1 Hour/Week**	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: This course is designed to acquaint the students with effective communication skills to showcase footwear design concepts to industry stakeholders						
GENERAL OBJECTIVE 1.0: Understand the elements of footwear design presentation.						
Week	**THEORETICAL CONTENT**			**PRACTICAL CONTENT**		
	Specific Learning Outcome	**Teacher's Activities**	**Resources**	**Specific Learning Outcome**	**Teacher's Activities**	**Resources**
1-4	1.1 Explain the elements of footwear design presentation. 1.2 Explain the importance of footwear design considerations such as functionality, aesthetics, culture, sustainability, etc. 1.3 Discuss the concept of research and development in the design presentation.	• Discuss the elements of a footwear design presentation. • Discuss the importance of footwear design considerations such as functionality, aesthetics, culture, sustainability, etc. • Explain the concept of research and development in a design presentation.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc			
General Objective 2.0: Know how to apply design principles to create a presentation.						
5-8	2.1 Discuss how to apply design principles such as balance, proportion, emphasis, movement, pattern, unity and contrast, etc. for design presentation.	• Describe how to apply design principles such as balance, proportion, emphasis, movement, pattern, unity and contrast,	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc	• Identify design principles to create a poster, flyer, etc.	Guide the student to: • Create a poster, flyer, slide, etc using design principles	Sample Posters Flyers, Slides, Magazines, etc

	2.2 Give the importance of brand identity in design presentation. 2.3 Analyse existing designs to determine how design principles are applied.	etc., for design presentation. • Discuss the importance of brand identity in design presentation. • Describe existing designs to determine how design principles are applied.				
General Objective 3.0: Understand how to develop footwear design collections using inspirational elements						
9-11	3.1 Explain the current trends in footwear design presentation. 3.2 Explain how design inspiration can be achieved using elements such as nature, art, architecture, and cultural heritage as a theme. 3.3 Explain silhouettes based on design inspiration as mentioned in 3.2. 3.4 Describe the established footwear designs, such as Oxford, Gibson, etc., for developing footwear design presentation	• Discuss the current trends in Sustainable footwear presentation design • Discuss how design inspiration can be achieved using elements such as nature, art, architecture, and cultural heritage as a theme • Describe silhouettes based on design inspiration as mentioned in 3.2 • Describe the established footwear designs such as Oxford, Gibson, etc. • for developing	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc	• Demonstrate footwear design presentation using comparative last silhouettes.	• Assess the students' footwear design presentation	Different shoe last Multimedia projector Computers installed with the necessary software Colour charts Cardboard paper

		footwear design presentation				
General Objective 4.0: Appreciate how to make a footwear design and prototype						
12-13	4.1 Explain the concept of footwear design development through sketching, rendering, and visualising ideas. 4.2 Explain materials, techniques and technologies for prototyping. 4.3 Explain how iteration, feedback and revision can be used for footwear design refinement.	• Explain the concept of footwear design development through sketching, rendering, and visualising ideas. • Explain materials, techniques and technologies for prototyping. • Explain how iteration, feedback and revision can be used for footwear design refinement.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc			
General Objective 5.0: Know how to make a presentation using design communication skills						
14-15	5.1 Explain design portfolio. 5.2 Explain how to create a professional portfolio. 5.3 Explain how to create an online presence and pitching in footwear design presentation.	• Discuss design portfolio • Describe how to create a professional portfolio • Describe how to create an online presence and pitching in footwear design	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc	• Create a social media account and advertise a footwear product using video clips.	Guide students to: • Create social media accounts and advertise footwear products using video clips.	A computer with the necessary software installed.

COURSE ASSESSMENT	
COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

RESEARCH METHODOLOGY

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: RESEARCH METHODOLOGY		**Course Code: LFT 414**	**Contact Hours: 2 Hours/Week**
		Credit Unit: 2	**Theoretical: 1 Hour/Week**
Year II	**Semester I**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: This course is designed to equip students with research skills, inquisitiveness and objectivity when presenting research outcomes in a logical order			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Know the concept, types, process and steps involved in research work;
2.0 Understand the scientific approach to research work;
3.0 Know how to review literature;
4.0 Know how to design a research work;
5.0 Understand research problem;
6.0 Understand the formulation of hypotheses;
7.0 Understand variables in research work;
8.0 Understand sample and sampling techniques;
9.0 Know the tools and techniques of data collection;
10.0 Understand data analysis techniques;
11.0 Know how to report research findings.

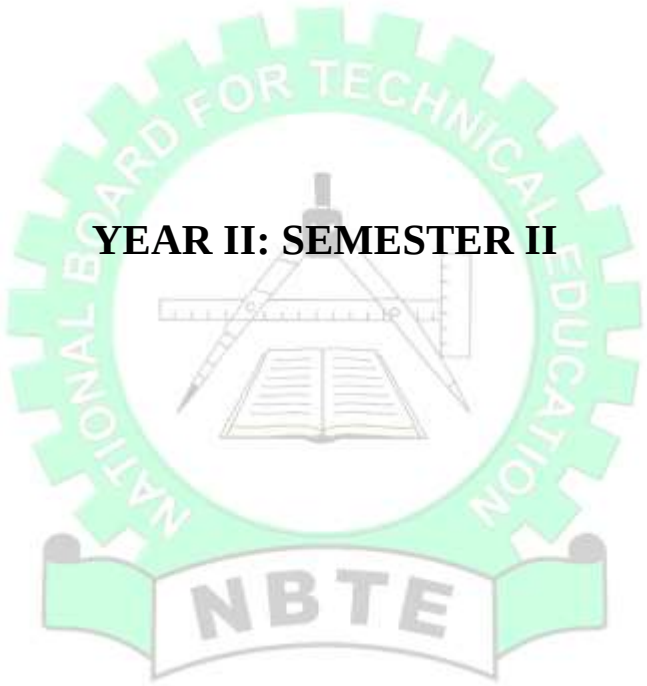
PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: RESEARCH METHODOLOGY			Course Code: LFT 414		Contact Hours: 2 Hours/Week	
			Credit Unit: 2		Theoretical: 1 Hour/Week	
Year I	Semester II		Pre-requisite:		Practical: 1 Hour/Week	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: This course is designed to equip students with the knowledge of research skills, inquisitiveness and objectivity when presenting research outcomes in a logical order						
General Objective 1.0: Know the concept, types, process and steps involved in research work						
Week	THEORETICAL CONTENT			PRACTICAL CONTENT		
	Specific Learning Outcome	Teacher's Activities	Resources	Specific Learning Outcome	Teacher's Activities	Resources
1	1.1 Define Research Methods. 1.2 Explain types of research methods 1.3 Discuss the problems of research work e.g. conceptualisation, generalisation etc. 1.4 Discuss steps in research process. 1.5 Explain the characteristics of research methods. 1.6 Explain ethical considerations in Research work.	• Explains research, its types and problems. • Explain the characteristics of a research work and its steps. • Explains ethical considerations in research work.	Textbooks, whiteboards, markers, laptops, overhead projector, journals, writing materials.			
General Objective 2.0: Understand the scientific approach to research work.						
2	2.1 Discuss the scientific methods in research. 2.2 State the aims of science in research	• Explains the methods, aims and functions of science in research. • Explain the differences	Laptop computers, smart board, Projector,			

	2.3 Explain the functions of science in research. 2.4 Compare science and common sense in research.	between science and common sense in research.	Writing Materials, Whiteboard, Markers, Internet, etc			
General Objective 3.0: Know how to review literature.						
3-4	3.1 State the relevance of the literature review in research work. 3.2 Outline the sources of literature. 3.3 Explain Appendix, organisation and referencing styles 3.4 Explain referencing tools such as: a. Mendeley b. Endnote, c. Jabref etc.	Explain the relevance of literature review in research. Explain the sources of literature. Describe the organisation and referencing styles. Explain referencing tools such as Mendeley, EndNote, JabRef, etc.	Textbooks, whiteboards, markers, laptops, overhead projectors, journals, writing materials.	• Review previous research reports, journals, textbooks to articulate its literature and sources. • Use referencing tools such as Mendeley, EndNote, JabRef, etc.	• Trip to library and other archives to see various literature and their sources. • Use referencing tools such as Mendeley, EndNote, JabRef etc.	Logistics, journals, textbooks, newspapers, internet, archives, presentations
General Objective 4.0: Know how to design a research work.						
5-6	4.1 Explain research design such as: a. Descriptive b. Experimental c. Mixed method etc. 4.2 Discuss the purposes of research design. 4.3 Explain the principles of research design. 4.4 Identify design criteria. 4.5 Describe the process of writing a research	• Explain the meaning, purpose and principles of research design. • Explain design criteria.	Textbooks, whiteboards, markers, laptops, overhead projector, journals, writing materials.	• Write a research proposal.	• Guide the student to write a research proposal.	Previous research works, journals, books, and presentations

	proposal.					
General Objective 5.0: Understand research problem.						
7-8	5.1 Define research problems. 5.2 Formulate research problem. 5.3 Identify the steps in the evaluation of a research problem. 5.4 State the features of a researchable problem. 5.5 Critique the sample research problem.	• Explain research problem. • Describe sample research problems. • Describe the formulation of research questions. • Explain the steps in the evaluation of research problem. • Explain a researchable problem and its features.	Textbooks, whiteboards, markers, laptops, overhead projectors, journals, writing materials.	• Analyse sampled research problems • formulate a research question	• Guide students to analyse various samples of research probl ems and the ways of correcting them.	Previous research works, journals, books, and presentations
General Objective 6.0: Understand the formulation of hypotheses.						
9	6.1 Define hypotheses. 6.2 Explain the null and alternate hypotheses. 6.3 Explains the difference between null and alternate hypotheses. 6.4 State the relationship between hypotheses and research questions.	• Explain hypotheses and its characteristics. • Differentiate between null and alternate hypotheses. • Explain the relationship between hypotheses and research questions.	Textbooks, whiteboards, marker, laptop, overhead projectors, journals, writing materials.	• Present previous research works and compare the hypotheses to identify null and alternate hypotheses in previously presented research works.	• Guide students to formulate and analyse hypotheses.	Previous research works, journals, books, presentations
General Objective 7.0: Understand variables in research work						
10	7.1 Define variables in research work. 7.2 Explain types of variables. 7.3 Discuss consideration for the choice of	• Explain variables, their types and relevance. • Explain consideration in the choice of variables. • Explain the relevance of variables to research	Laptop computers, smart board, Projector, Writing Materials,			

	variables. 7.4 Explain the relevance of variables to research work.	outcomes.	Whiteboard, Markers, Internet Pictures, Videos etc.			
General Objective 8.0: Understand sample and sampling techniques						
11	8.1 Explain the following: a. Population b. Population Sample c. Population Sample Size 8.2 Explain Types of Sampling Techniques. 8.3 Discuss the need for samples.	• Explain population, sample and representation. • Describe types of sampling techniques. • Explain the need for a sample within a population	Books, journals, internet, chalkboard, writing materials	• Demonstrate a community as a population and create a sample and representation from the population using different sampling techniques	• Organise Field trip to the chosen community and showing the process of arriving at a sample or representation from that community	Books, journals, presentations, materials for references, Chosen Community
General Objective 9.0: Know the tools and techniques for data collection						
12	9.1 Define research instrument. 9.2 Discuss types of research instruments. 9.3 Enumerate characteristics of research instruments. 9.4 State the problems associated with various research instruments.	• Explain the research instrument. • Explain types of research instruments. • Explain characteristics of research instruments. • Explain the problems associated with various research instruments.	Textbooks, whiteboards, markers, laptops, overhead projectors, journals, writing materials.	• Identify research instruments. • Demonstrate Qualitative and Quantitative data collection skills	Guide students to: • Identify research instruments. • Demonstrate Qualitative and Quantitative data collection skills.	Sampled research tools, journals, proceedings and research reports.
General Objective 10.0: Understand data analysis techniques						
13	10.1 Define data analysis. 10.2 Discuss the tools for data analysis. 10.3 Differentiate between	• Explain data analysis. • Explain the tools for data analysis. • Explain the difference	Textbooks, whiteboards, markers, laptops,	• Use different data analysis tools such as EXCEL,	Guide students to: 1. Identify different data analysis tools	Books, journals, research work,

	quantitative and qualitative data analysis. 10.4 Explain the limitations of tools for data analysis.	between quantitative and qualitative data analysis. • Explain limitations of tools for data analysis.	overhead projectors, journals, writing materials.	SPSS etc.	and their presentation in previous work, such as EXCEL, SPSS etc.	presentation Data analysis packages
General Objective 11.0: Know how to report research findings						
14-15	11.1 Define research report writing 11.2 Identify the contents of a research report writing: a. Preliminaries b. Introduction c. Literature review d. Methodology e. Analysis f. Results g. Discussion h. Conclusion i. Recommendation j. Reference k. Appendix 11.3 Discuss the importance of accurate presentation of research report.	• Explain research report writing • Explain the contents of research report writing. ▪ Preliminaries ▪ Introduction ▪ Literature review ▪ Methodology ▪ Analysis ▪ Results ▪ Discussion ▪ Conclusion ▪ Recommendation ▪ Reference ▪ Appendix • Explain the importance of accurate presentation of research report.	Textbooks, whiteboards, marker, laptop, overhead projectors, journals, writing materials.	• Demonstrate good research report writing	Guide students to: 1. Demonstrate good research report writing.	Journals, research work, presentation Sample previous research reports or guides, Reference guide etc
COURSE ASSESSMENT COURSE WORK: 10% TESTS 10% PRACTICAL 40% EXAMINATION 40% **TOTAL 100%**						



YEAR II: SEMESTER II

SUSTAINABLE DESIGN

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: SUSTAINABLE DESIGN		**Course Code: LFT 421**	**Contact Hours: 2 Hours/Week**
		Credit Unit: 2	**Theoretical: 2 Hours/Week**
Year II	**Semester II**	**Pre-requisite:**	**Practical: 0 Hour/Week**
GOAL: This course is designed to acquaint the students with sustainable footwear design and production.			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Comprehend the concept of footwear sustainable design;
2.0 Understand sustainable footwear materials;
3.0 Know sustainability in footwear production;
4.0 Understand footwear end-of-life strategies;
5.0 Appreciate trends and the future of sustainable footwear.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: **SUSTAINABLE DESIGN**			**Course Code: LFT 421**		**Contact Hours: 2 Hours/Week**	
			Credit Unit: 2		**Theoretical: 2 Hours/Week**	
Year II	**Semester II**		**Pre-requisite:**		**Practical: 0 Hour/Week**	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: This course is designed to acquaint the students with sustainable footwear design and production.						
GENERAL OBJECTIVE 1.0: Comprehend the concept of footwear sustainable design.						
Week	**THEORETICAL CONTENT**			**PRACTICAL CONTENT**		
	Specific Learning Outcome	**Teacher's Activities**	**Resources**	**Specific Learning Outcome**	**Teacher's Activities**	**Resources**
1-2	1.1 Discuss environmental sustainability concepts relevant to footwear design and manufacture. 1.2 Discuss social sustainability concepts relevant to footwear design and manufacture. 1.3 Discuss economic sustainability concepts relevant to footwear design and manufacture.	• Explain environmental sustainability concepts relevant to footwear design and manufacture. • Explain social sustainability concepts relevant to footwear design and manufacture. • Describe economic sustainability concepts relevant to footwear design and manufacture.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc			
General Objective 2.0: Understand sustainable footwear materials						
3-4	2.1 Explain bio-based, biodegradable and recycled materials. 2.2 Explain the use of recycled rubber, plastics and textiles in footwear production.	• Discuss bio-based, biodegradable and recycled materials. • Discuss the use of recycled rubber, plastics and textiles in footwear production.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc			

	2.3 Explain renewable and non-renewable resources in footwear production.	• Explain renewable and non-renewable resources in footwear production.				
General Objective 3.0: Know sustainability in footwear production						
5-8	3.1 Discuss circular economy principles in footwear production, such as cradle-to-cradle, design for disassembly, and design for durability. 3.2 Explain the sustainable supply chain in footwear production. 3.3 Discuss ethical sourcing and traceability of footwear materials. 3.4 Explain fair labour conditions and social responsibility.	• Explain circular economy principles in footwear production such as cradle-to-cradle, design for disassembly, design for durability. • Explain the sustainable supply chain in footwear production. • Discuss ethical sourcing and traceability of footwear materials. • Explain fair labour conditions and social responsibility.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc			
General Objective 4.0: Understand footwear end-of-life strategies						
8-11	4.1 Explain recycling and upcycling approaches for handling used footwear. 4.2 Discuss the biodegradability of footwear and footwear materials. 4.3 Discuss valorisation of wastes from the footwear industry.	• Explain recycling and up-cycling approaches for handling used footwear. • Discuss biodegradability of footwear and footwear materials. • Describe valorisation of waste from the footwear industry. • Discuss the principles of	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc			

	4.4 Discuss principles of life cycle analysis of footwear and footwear materials.	life cycle analysis of footwear and footwear materials.				
General Objective 5.0: Appreciate trends and the future of sustainable footwear						
12-15	5.1 Discuss current trends in sustainable footwear design and technology. 5.2 Explain emerging trends and innovation in sustainable footwear design and manufacture. 5.3 Discuss challenges and opportunities in adopting sustainability models in the footwear industry. 5.4 Discuss the role of policies and regulations in driving sustainability in the footwear industry.	• Explain current trends in sustainable footwear design and technology. • Explain emerging trends and innovations in sustainable footwear design and manufacture. • Discuss challenges and opportunities in adopting sustainability models in the footwear industry. • Discuss the role of policies and regulations in driving sustainability in the footwear industry.	E-book, Textbooks, Journals, Magazines, Video clips, Charts, Marker etc			

COURSE ASSESSMENT

COURSE WORK:	20%
TESTS	20%
EXAMINATION	60%
TOTAL	**100%**

PACKAGING AND BRANDING

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: PACKAGING AND BRANDING		**Course Code: LFT 422**	**Contact Hours: 3 Hours/Week**
		Credit Unit: 3	**Theoretical: 2 Hours/Week**
Year II	**Semester II**	**Pre-requisite:**	**Practical: 1 Hour/Week**
GOAL: This course is designed to acquaint the students with packaging and branding of footwear			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Understand the concept of packaging and branding strategies for footwear;
2.0 Know types of packaging material and its sustainability;
3.0 Comprehend key aspects of visual identity;
4.0 Know footwear branding and marketing;
5.0 Understand packaging functions.

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)					
COURSE TITLE: **PACKAGING AND BRANDING**			**Course Code: LFT 422**	**Contact Hours: 3 Hours/Week**	
			Credit Unit: 3	**Theoretical: 2 Hours/Week**	
Year II	**Semester II**		**Pre-requisite:**	**Practical: 1 Hour/Week**	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL					
GOAL: This course is designed to acquaint the student with packaging and branding of footwear					
GENERAL OBJECTIVE 1.0: Understand the concept of packaging and branding strategies for footwear					
Week	**THEORETICAL CONTENT**			**PRACTICAL CONTENT**	
	Specific Learning Outcome	**Teacher's Activities**	**Resources**	**Specific Learning Outcome**	**Teacher's Activities**	**Resources**
1-2	1.1 Explain the elements and principles of packaging and branding. 1.2 Explain the importance of packaging in footwear protection and marketing. 1.3 Explain brand identity and footwear product positioning.	• Describe the elements and principles of packaging and branding. • Discuss the importance of packaging in footwear protection and marketing. • Describe brand identity and footwear product positioning.	E-books, Textbooks, Journals, Magazines, Video clips, Charts, Marker, Manuals, E-Gallery, etc	• Demonstrate packaging and brand identity using relevant software.	Guide the student to: • Use CorelDraw, Paint, Photoshop, Adobe Illustrator and Auto-Cad. • Design brand identity for products that are appealing.	Computer, Printer, Projector, CorelDraw, Paint, Photoshop, Adobe Illustrator and Auto-Cad, Pencil Cardboard etc.
General Objective 2.0: Know the types of packaging material and their sustainability.						
3-6	2.1 Describe types of packaging materials for footwear. 2.2 Discuss the shape, graphics and functionality of packaging materials for footwear.	• Explain types of packaging materials for footwear. • Explain the shape, graphics and functionality of packaging materials for footwear.	E-books, Textbooks, Journals, Magazines, Video clips, Charts, Marker, Manuals, E-	• Make prototype packages of different sizes from different materials. • Design brand identity on	Guide students to: • Make prototypes of packaging materials of different sizes from different materials.	Cardboard paper, Cutting knives Measuring instruments Adhesives etc

	2.3 Describe how packaging can be used to communicate brand story and values. 2.4 Explain the role of packaging in enhancing customer experience.	• Explain how packaging can be used to communicate brand story and values. • Explain the role of packaging in enhancing customer experience.	Gallery, etc	different materials for product display and appeal.		
General Objective 3.0: Comprehend the key aspects of visual identity						
7-10	3.1 Explain the key elements of footwear visual identity. 3.2 Discuss colour psychology and colour palettes. 3.3 Discuss the effective use of imagery and design on packaging. 3.4 Explain the digital and physical effective use of imagery and design on packaging.	• Explain the key elements of footwear visual identity. • Analyse colour psychology and colour palettes. • Discuss the effective use of imagery and design on packaging. • Explain the digital and physical effective use of imagery and design on packaging.	E-books, Textbooks, Journals, Magazines, Video clips, Charts, Marker, Manuals, etc	• Create logos and logo-type manuallly. • Design logo and logo-type using appropriate software. • Print the design for further improvement.	Guide students to: • Manually create logos and logo-type. • Design logo and logo-type using appropriate software. • Print the design for further improvement.	Computer with the necessary software Cardboard paper Clicking materials
General Objective 4.0: Know footwear branding and marketing.						
11-13	4.1 Discuss the marketing Channels for footwear. 4.2 Discuss how to build a strong brand image and identity for footwear products. 4.3 Explain the role of	• Discuss the marketing Channels for footwear. • Discuss how to build strong brand image and identity for footwear	E-books, Textbooks, Journals, Magazines, Video clips, Charts, Marker,			

	influencer, partnership and collaborations in footwear branding. 4.4 Explain how to use SWOT (Strengths, Weaknesses, Opportunities and Threats) to develop a strong brand identity.	products. • Explain the role of influencer, partnership and collaborations in footwear branding. • Explain how to use SWOT (Strengths, Weaknesses, Opportunities and Threats) to develop a strong brand identity.	Manuals, etc			
General Objective 5.0: Comprehend packaging functions.						
14-15	5.1 Explain packaging for protection, preservation and safeguarding footwear during transport. 5.2 Explain the packaging design for retail display, appeal and user-friendly. 5.3 Explain how to balance cost with effective packaging.	• Describe packaging for protection, preservation and safeguarding footwear during transport. • Explain the packaging design for retail display, appeal and user-friendly. • Explain how to balance cost with effective packaging.	E-books, Textbooks, Journals, Magazines, Video clips, Charts, Marker, Manuals, etc			

COURSE ASSESSMENT	
COURSE WORK:	10%
TESTS	10%
PRACTICAL	40%
EXAMINATION	40%
TOTAL	**100%**

LEATHER GOODS FASHION DESIGN

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)			
COURSE TITLE: LEATHER GOODS FASHION DESIGN		**Course Code: LFT 423**	**Contact Hours: 2 Hours/Week**
		Credit Unit: 2	**Theoretical: 2 Hours/Week**
Year II	**Semester II**	**Pre-requisite:**	**Practical: 0 Hour/Week**
GOAL: This course is designed to help students understand the fundamentals of leather goods fashion designs.			

GENERAL OBJECTIVES

On completion of this course, the students should be able to:

1.0 Understand Leather Goods Fashion Designs;
2.0 Know the materials and methods for leather goods design and manufacture;
3.0 Know the concept of design development in relationship to current Fashion Trend Illustration and Visualization in Leather-goods.
4.0 Know how to develop Fashion Design Portfolio and Applications

PROGRAMME: HIGHER NATIONAL DIPLOMA IN LEATHER AND LEATHER PRODUCTS (FOOTWEAR OPTION)						
COURSE TITLE: LEATHER GOODS FASHION DESIGN			Course Code: LFT 423		Contact Hours: 2 Hours/Week	
			Credit Unit: 2		Theoretical: 2 Hours/Week	
Year II	Semester II		Pre-requisite:		Practical: 0 Hour/Week	
COURSE SPECIFICATION: THEORETICAL AND PRACTICAL						
GOAL: This course is designed to enable students to understand the fundamentals of leather goods fashion designs						
GENERAL OBJECTIVE 1.0: Understand Leather Goods Fashion Designs						
Week	THEORETICAL CONTENT			PRACTICAL CONTENT		
	Specific Learning Outcome	Teacher's Activities	Resources	Specific Learning Outcome	Teacher's Activities	Resources
1-3	1.1 Explain fashion trends in leather goods 1.2 Discuss the elements and principles of design applied to leather goods 1.3 Discuss environment-friendly approaches in the design and production of leather goods.	• Explain fashion trends in leather goods. Show the historical development in Nigeria fashion world. • Discuss the elements and principles of design applied to leather goods. • Discuss environment-friendly approaches in design and production of leather goods. Elaborate on current methods in green-means of leather goods production.	Textbooks, Encyclopedia, E-books, Journals, Magazines, Video clips, Charts, Marker			

General Objective 2.0: Know the materials and methods for leather goods design and manufacture						
4-6	2.1 Discuss different types of leathers and their properties 2.2 Explain alternative materials for leather goods manufacture such as synthetic and vegan 2.3 Discuss the construction techniques or methods for leather goods manufacture 2.4 Discuss surface treatments of leather goods such finishes, dyeing and embellishments	• Itemize and discuss different types of leathers and their properties • Explain and categorize the alternative materials for leather goods manufacture • Discuss the construction techniques or methods for leather goods manufacture. • Categorize various surface treatments of leather goods such finishes, dyeing and embellishments.	Textbooks, Encyclopedia, E-books, Journals, Magazines, Video clips, Charts, Marker	• Demonstrate how to design and make leather goods such; Belt, Wallets, Purse, Wrist watch strap and Handbag.	Guide students to: • Create leather goods such as: Belt, Wallets, Purse, Wrist watch strap and Handbag.	Leather Synthetic materials Sewing machine Cardboard paper Cutting machine Pencil, Adhesive, Measuring instrument.
General Objective 3.0: Know the concept of design development in relationship to current Fashion Trend Illustration and Visualization in Leather-goods						
7-10	3.1 Explain the techniques in hand drawing and digital illustration for leather goods 3.2 Discuss Digital Tools and the use of software for design visualization 3.3 Describe how to develop a design portfolio for leather goods	• Discuss the techniques in hand drawing and digital illustration for leather goods • Application of digital tools and the use of software like AutoCAD, CorelDraw, Paint, Adobe, Illustrator,	Textbooks, Encyclopedia, E-books, Journals, Magazines, Video clips, Charts, Marker.	• Demonstrate skills in hand drawing and digital illustration for leather goods • Demonstrate portfolio development showcasing leather goods	Guide students to: • Carry out portfolio development showcasing leather goods design using multimedia and presentation board • Demonstrate	Presentation Board Multimedia projector. AutoCAD, CorelDraw, Paint, Adobe, Illustrator, photoshop

	3.4 Describe how to present design skills to industry stakeholders	photoshop etc for design visualization • Show the use of design portfolio for leather goods manufacture • Explain how to present design brief to industry stakeholders.		design. • Identify the digital tools and software like AutoCAD, CorelDraw, Paint, Adobe, Illustrator, photoshop etc needed for design visualization	application of digital tools and software like AutoCAD, CorelDraw, Paint, Adobe, Illustrator, photoshop etc needed for design visualization	
General Objective 4.0: Know how to Develop Fashion Design Portfolio and Applications						
10-12	4.1 Explain how to create a leather goods collection concept through a design project 4.2 Enumerate peer and instructor feedback on leather good design work 4.3 Explain the steps and policies involved in Industry Collaboration.	• Explain how to create leather goods collection concept. Form groups of students to understudy the collection concept. • Use feedback peer review system to ascertain level of understanding on leather good collection concept. • Discuss the steps and policies needed for collaboration with the industry.	Textbooks, Encyclopedia, E-books, Journals, Magazines, Video clips, Charts, Marker.	• Create various groups to handle design project on leather goods such as: Belt, Wallets, Purse, Wrist watch strap and Hand bag	Guide students to: • Carry out a design project and how to report such for a collaborative purpose. • Role play group activities.	Leather Synthetic materials Sowing machine Cardboard paper Cutting machine Pencil Measuring instrument.

COURSE ASSESSMENT	
COURSE WORK:	20%
TESTS	20%
EXAMINATION	60%
TOTAL	**100%**

LIST OF MINIMUM RESOURCES/PHYSICAL FACILITIES

i. Audio Visual and Footwear Design Studio

S/N	DESCRIPTION OF EQUIPMENT/ITEMS	QUANTITY REQUIRED
1.	Computer System (installed with appropriate software such as: CorelDraw, Adobe Illustrator, Photoshop, AutoCAD, etc.)	40
2.	Projectors (Film/Overhead/slide/LCD/ PowerPoint)	1
3.	Public Address System	1
4.	Display Screen	1
5.	Power Supply (Generator or PV Solar System)	1

ii. Footwear Workshop Equipment and Apparatus

S/N	DESCRIPTION OF EQUIPMENT/ITEMS	QUANTITY REQUIRED
1.	Fore part Lasting Machine	1
2.	Back part lasting machine	1
3.	Heat Setting Machine	2
4.	Adhesive activator	2
5.	Sole Attaching Machine	4
6.	Back Part Moulding Machine	1
7.	Eyeleting Fixing Machine	2
8.	Insole Moulding Machine	1
9.	Last Removal Machine	2
10.	Toe-puff Steaming Machine	1
11.	Clicking Machine	2
12.	Roughing Machine	4
13.	Spraying Booth	1
14.	Folding Machine	1
15.	Splitting Machine	1

16.	Sole Expanding Device	1
17.	Hydraulic Sole Attaching Machine	3
18.	Arm Cylinder Industrial Sewing Machine	10
19.	Flat Bed Industrial Sewing Machine	40
20.	Post Industrial Sewing Machine	10
21.	Lasting pincer	60
22.	Hammer	60
23.	Mallet	60
24.	Shoe Last	80
25.	Sandal Last	40
26.	Boot Last	80
27.	Scissors	100
28.	Skiving knives	80
29.	Clicking knives	80
30.	Stamping Machine	3
31.	Industrial Compressor	1

iii. Equipment and Apparatus for Quality Control Laboratory

S/N	DESCRIPTION OF EQUIPMENT/ITEMS	QUANTITY REQUIRED
1.	Crushing machine	1
2.	Water Heater (temp)	1
3.	Shrinkage Temperature Apparatus	1
4.	Adhesion Of Finish Tester	1
5.	Kjeldahl Apparatus	1
6.	Hot Water Bath	1
7.	Rub Fastness Tester	1
8.	Water Absorption Apparatus	1

9.	Dial Micrometre Guage	1
10.	Upper Flexing Machine	1
11.	Tensiometer	1
12.	Lastometer	1
13.	Water Vapour Permeability Tester	1
14.	Weighing Balance	2
15.	Hardness Tester	1
16.	Drying Oven	1
17.	pH Meter	1
18.	Sohxlet Apparatus	1
19.	Heating Mantel	1
20.	Sample Cutters	3
21.	Leather Softness Tester	
22.	Muffle Furnace	1
23.	Uv-Vis Spectrometer (Peak E1000uv)	1
24.	Flask Shaker	2
25.	Refrigerator	1
26.	Fume Extraction Chamber	1

iv. Footwear Workshop Materials

S/N	DESCRIPTION OF EQUIPMENT/ITEMS	QUANTITY REQUIRED
1.	Neupreme Adhesive	50 Gallons
2.	Polyurethane (PU)	20 Gallons
3.	Shoe upper Leather	2000 Sq.ft
4.	Side Leather	2000 Sq.ft
5.	Linning Leather	3500 Sq.ft
6.	Wrapping Synthetic	40 yards
7.	Fabric (Canvas Material)	20 yards
8.	Fibre Board	60 Sheets
9.	Microcellular Rubber	40 Sheets
10.	Tacknail	60 Packs
11.	Sand paper	30 Yards
12.	Elastic Band	20 Yards
13.	Chain	40 Pairs
14.	Shoe Buckle	40 Pairs
15.	Sandal Buckle	40 Pairs
16.	Belt Buckle	60 Pieces
17.	Shank	80 Pairs
18.	Thread (Assorted colours)	40 pieces
19.	Eyelet	4 Packs
20.	Shoe Lace	80 Pairs
21.	Boot Lace	80 Pairs
22.	Stiffener	60 Pairs
23.	Toe-puff	20 Sheets
24.	Nose Mask	200 Packs

25.	Tracing Pen	20 Packs
26.	Heel	60 Pairs
27.	Crepe Rubber	5 Sheets
28.	Shoe Soles	100 Pairs
29.	Sandal Soles	100 Pairs
30.	Boot Sole	100 Pairs

v. Safety and Personal Protective Equipment

S/N	DESCRIPTION OF EQUIPMENT/ITEMS	QUANTITY REQUIRED
1	First Aid Box	8
2	PPE (Personal Protective Equipment)	100
3	Fire Extinguishers	8
4	Sand Bucket	4
5	Water Supply	Available with Hose
6	Shower Stand	4

LIST OF WORKSHOP PARTICIPANTS

A. NATIONAL CURRICULUM PRE-CRITIQUE WORKHOP

S/N	NAME	CONTACT ADDRESS	EMAIL ADDRESS
1.	Prof. Paul Mamza	Ahmadu Bello University, Zaria	paulmamza@yahoo.com
2.	Dr J. I Tagang	Nigerian Institute of Leather and Science Technology, Zaria	jerrytagang@yahoo.com
3.	Mal. Musa Isah	GB Tannery Limited, Kano	musisbomo990@gmail.com
4.	Prof. Isa Muhammed Tijani	Chemical Engineering Ahmadu Bello University, Zaria	mtisaz@yahoo.com
5.	Mrs. Maryam Mohammed Jungudo	Nigerian Institute of Leather and Science Technology, Zaria	jungudomaryam@gmail.com
6.	Mal. Shehu Idris	Nigerian Institute of Leather and Science Technology, Zaria	ldrisshehu196@gmail.com
7.	Dr. O.O Bello	Director, Curriculum Development, National Board for Technical Education, Kaduna	engroobello@gmail.com
8.	Jamila Jibrin	National Board for Technical Education, Kaduna	jibriljamila7@gmail.com
9.	Mal. Usman Sani Bala	National Board for Technical Education, Kaduna	sanibalausman10@gmail.com
10.	Engr. Hussaini Musa	National Board for Technical Education, Kaduna	musahussani131@gmail.com

B. NATIONAL CURRICULUM FINAL CRITIQUE WORKSHOP

S/N	NAME	CONTACT ADDRESS	EMAIL ADDRESS
1.	Prof. Paul Mamza	Department of Chemistry, Ahmadu Bello University, Zaria	paulmamza@yahoo.com
2.	Prof. O. A. Ajayi	Department of Chemical Engineering, Ahmadu Bello University, Zaria	segeaj@yahoo.com
3.	Dr. J. I. Tagang	Society of Leather Technologists & Chemists of Nigeria	jerrytagang@yahoo.com
4.	Engr. Ibrahim Balarabe Mohammed	Nigerian Institute of Leather and Science Technology, Zaria	balarabeibrahim02@gmail.com
5.	Mr. Ishidi Daniel Moses	Nigerian Institute of Leather & Science Technology, Zaria	ishidicollections@gmail.com
6.	Dr. O.O. Bello	National Board for Technical Education, Kaduna	engroobello@gmail.com
7.	Mrs. Ramatu Adeiza	National Board for Technical Education, Kaduna	ramatuishq04@gmail.com
8.	Mrs. Zainab Sulaiman Ardo	National Board for Technical Education, Kaduna	sisterzeefta@gmail.com
9.	Mrs. Foluke Ewuruje	National Board for Technical Education, Kaduna	pholukeng@yahoo.com
10.	Mrs. Rukayya Uthman	National Board for Technical Education, Kaduna	rukayyaauthman87@gmail.com
11.	Mrs. Hassana Bashir Mohammed	National Board for Technical Education, Kaduna	mohammedhaseenah@gmail.com