

**PROPOSED CURRICULAR STRUCTURE FOR PART-II (2ND YEAR) OF THE
FULLTIME DIPLOMA COURSE IN ENGINEERING & TECHNOLOGY.**

WEST BENGAL STATE COUNCIL OF TECHNICAL EDUCATION													
TEACHING AND EXAMINATION SCHEME FOR DIPLOMA IN ENGINEERING COURSES													
COURSE NAME:LEATHER GOODS TECHNOLOGY													
SEMESTER:FOURTH													
BRANCH CODE:LGT													
SL. NO.	SUBJECT	CREDITS	PERIODS			EVALUATION SCHEME							
			L	TU	PR	INTERNAL SCHEME			ESE	TW	PR		TOTAL MARKS
						TA	CT	TOTAL			INT	EXT	
1.	DEVELOPMENT OF LIFE SKILLS-II	2	1	-	2	-	-	-	-	-	25	25	50
2.	PRINCIPLES OF DESIGNING & PATTERN DEVELOPING	6 (3+3)	3	-	6	10	20	30	70	-	75	75	250
3.	LEATHER GOODS MANUFACTURING TECHNIQUES	6 (3+3)	3	-	5	10	20	30	70	-	75	75	250
4.	MATERIAL STUDY (NON-LEATHER)	3	3	-	-	10	20	30	70	-	-	-	100
5.	MACHINERIES FOR LEATHER GOODS - PART-I	3	3	-	-	10	20	30	70	-	-	-	100
6.	ELEMENTS OF FASHION FORECASTING	2	2	-	-	5	10	15	35	-	-	-	50
7.	COMPUTER AIDED DESIGNING FOR LEATHER GOODS TECHNOLOGY 2D - PART- II	2	-	-	3	-	-	-	-	-	25	25	50
8.	PROFESSIONAL PRACTICE-II	2	-	2	-	-	-	-	-	-	25	25	50
TOTAL		26	15	2	16	45	90	135	315	0	225	225	900
STUDENT CONTACT HOURS PER WEEK: 33 HRS.													
THEORY & PRACTICAL PERIOD OF 60 MINUTES EACH.													
L-LECTURE; TU- TUTORIALS; PR-PRACTICAL (INT-INTERNAL & EXT-EXTERNAL); TW- TERM WORK ;													
TA-TEACHERS ASSESSMENT; CT- CLASS TEST; ESE- END SEMESTER EXAMINATION.													

DEVELOPMENT OF LIFE SKILLS- II

Duration : One Semester (16 Hours)		Practical Marks: 50
Teaching Scheme		Examination Scheme:
Theory: 01 hrs/week		Internal Sessional: 25
Tutorial: --- hrs/week		External Sessional: 25
Practical: 02 hrs/week		
UNITS	CONTENTS	HOURS
Unit-1	Interpersonal Relation Importance, Interpersonal conflicts, Resolution of conflicts, Developing effective. Interpersonal Skills- Communication and conversational skills, Human relation skills (Personal Skills).	5
Unit-2	Problem Solving I) Steps in Problem Solving (Who? What? Where? When? Why? How? How much?) 1. Identify, understand and clarify the problem. 2. Information gathering related to problem. 3. Evaluate the evidence 4. Consider feasible options and their implications. 5. Choose and implement the best alternative 6. Review. II) Problem Solving Technique 1. Trial and Error. 2. Brain Storming. 3. Thinking outside the Box	8
Unit-3	Presentation Skills Concept, Purpose of effective presentation. Components of Effective Presentations: Understanding the Topic, Selecting the Right Information, Organizing the process interestingly, Good attractive beginning, Summarizing and concluding, adding Impact to the Ending, Use of audio-visual aids- OHP, LCD projector, Whit Board: Non-verbal Communication: Posture, gesture, Eye-contact and facial expression, Voice and Language- Volume, Pitch, inflection, Speed, pause, Pronunciation. Articulation, Language Handling questions- respond, Answer, Check, Encourage, Return to Presentation Evaluating the presentation- Before the presentation, During the presentation, After the presentation	8

Unit-4	Looking for a job Identifying different sources announcing job vacancies, Skim, scan and read advertisements in detail, write efficacious CVs, write covering letters to accompany CVs, write Job Application Letters- in response to advertisements and self-applications	5
Unit-5	Job Interviews Prepare for Interviews: Intelligently anticipating possible questions and framing appropriate answers, Do's and don'ts of an interview (both verbal and non-verbal) Group Discussion: Use of Non-verbal behavior in group Discussions, Appropriate use of language in group interactions, Do's and don'ts for a Successful Group Discussion.	10
Unit-6	Non-verbal-graphic communication Non-verbal codes: A – kinetics, B – Proxemics, C – Haptics, D – Vocalics, E- Physical appearance, F- Chronemics, G- Artifacts. Aspect of Body Language.	6
Unit-7	Formal Written Skills: Memos, E-mails, Netiquettes, Business correspondence- Letter of enquiry, letter of Placing Orders, Letter of Complaint	6
TOTAL		48

SESSIONAL ACTIVITIES	
Unit-1 Interpersonal Relation	Case Studies: 1. from books 2. from real life situations 3. from student's experiences Group discussions on the above and step by step write of any one or more of these in the sessional copies.
Unit-II Problem Solving	Case Studies: 1. from books 2. from real life situations 3. from student's experiences Group discussions on the above and step by step write of any one or more of these in the sessional copies
Unit-IV Looking for a Job	Write an effective CV and covering letter for it. Write a job Application letter in response to an advertisement and a self Application Letter for a job
Unit-V Job Interviews and Group Discussions	Write down the anticipated possible question for personal interview (HR) along with their appropriate responses. Face mock interviews: The co-operation of HR personnel's of industries may be sought if possible. Videos of Mock group Discussions and interviews may be shown.

Unit-VI Formal Written Skills:	Write a memo, Write an effective official e-mail, write a letter of enquiry, letter of placing order
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PRINCIPLES OF DESIGNING AND PATTERN DEVELOPING

Subject Code	Course offered in	Course Duration	Contact Period Per Week	Full Marks
	2 nd Year 2 nd Semester	17 Weeks	3 Lecture 6 Practical	250 [100+150]

OBJECTIVE

1. To provide the participants with a general awareness of fashion and the ability to express this in a graphical format
2. To impart the necessary craft ability required for the production of model patterns.
3. To develop the ability to control line and production.
4. **Practical:** To provide the participants with the knowledge and to impart the skills and techniques necessary for leather goods designing and pattern developing.

EXAMINATION SCHEME

Internal Assessment - 30 marks; End Semester Examination (ESE) - 70 marks and Practical - 150 marks.

Distribution of Internal Assessment marks:

Teacher's Assessment (TA) - 10 marks; Class Test (CT) - 20 marks.

Practical-150 marks

Internal Assessment - 75 marks.

Distribution of Internal Assessment marks:

Practical Examination (Designing and Pattern Developing) - 30 marks; Periodic Assignment (Designing and Pattern Developing) - 30 marks; Practical Note Book - 15 marks.

External Assessment - 75 marks.

Distribution of External Assessment marks:

Practical Examination (Designing and Pattern Developing) - 50 marks; Viva-voce - 25 marks.

S L N O	SUBJECT	CREDITS	PERIODS			EVALUATION SCHEME						
			L	TU	PR	INTERNAL SCHEME			ESE	TW	PR	TOTAL MARKS
						TA	CT	TOTAL				
2.	PRINCIPLES OF DESIGNING AND PATTERN DEVELOPING	6 (3+3)	3	-	6	10	20	30	70	-	150	250

DETAIL COURSE CONTENT

• END SEMESTER EXAMINATION

A. DECORATIVE ITEMS DESIGNING

Decorative accessories fitting, Decorative plating, Decorative stitching, Making of decorative item with pattern making.

B. PATTERN MAKING

Waist belt (Gent's and ladies); Watch strap (Gent's and Ladies); and Pasted items.

C. MATERIAL SELECTION, TOOLS USED AND SEQUENCE OPERATION OF THE FOLLOWING ITEMS

- a. Wallet b. Purse c. Gents Pouch d. Tiffin Bag e. Office Bag f. Ladies Bag
 g. School Bag h. Traveling Bag i. Watch Strap j. Waist Belt.

• PRACTICAL

PATTERN TECHNOLOGY

Introduction; Development of Base Model from Sample;
 Pattern developing of the following items: (At least of two different styles each).
 a. Wallet b. Purse c. Gents Pouch d. Tiffin Bag e. Watch Strap.

TEXT BOOKS:

1. "Making of Leather Handbags and other Stylish Accessories" by *Ellen Goldstein-Lynch*. Quarry Books (October 1, 2004).
2. Leather Work - "A Manual of Techniques" by *Geoffrey West*. Crowood Press. New Edition (March 01, 2005).

LEATHER GOODS MANUFACTURING TECHNIQUES

Subject Code	Course offered in	Course Duration	Contact Period Per Week	Full Marks
	2 nd Year 2 nd Semester	17 Weeks	3 Lecture 5 Practical	250 [100+150]

OBJECTIVE

1. To make the students familiar with different techniques used for making of leather goods.
2. **Practical:** To learn all the operations of the following leather goods making manually and mechanically.

EXAMINATION SCHEME

Internal Assessment - 30 marks; End Semester Examination (ESE) - 70 marks and Practical - 150 marks.

Distribution of Internal Assessment marks:

Teacher's Assessment (TA) - 10 marks; Class Test (CT) - 20 marks.

Practical-150 marks

Internal Assessment - 75 marks.

Distribution of Internal Assessment marks:

Practical Examination (Job Performed) - 30 marks; Periodic Assignment (Job Performed) - 30 marks;

Viva-voce - 15 marks.

External Assessment - 75 marks.

Distribution of External Assessment marks:

Practical Examination (Job Performed) - 50 marks; Viva-voce -25 marks.

S L N O	SUBJECT	CREDITS	PERIODS			EVALUATION SCHEME						
			L	TU	PR	INTERNAL SCHEME			ESE	TW	PR	TOTAL MARKS
						TA	CT	TOTAL				
3.	LEATHER GOODS MANUFACTURING TECHNIQUES	6 (3+3)	3	-	5	10	20	30	70	-	150	250

DETAIL COURSE CONTENT

• END OF SEMESTER

A. COMPONENT PREPARATION

- Gusset preparation.
- Pocket preparation.
- Strap & Handle preparation.

B. STITCHING AND JOINING

- Different types of Stitches.
- Machine and hand tools preparation during stitching.
- Different types of Seam.
- Decorative Stitches.

C. SEQUENCE OF FABRICATION

- Reinforcement attachment.
- Lining attachment.
- Component preparation.
- Accessories fittings.
- Component assembling.
- Final stitching.
- Finishing.

D. TYPES OF CONSTRUCTION

- Stitched Construction: Introduction; Process details, Construction process with different types of edge treatment like raw edged, turned edge, piping edge etc.
- Pasted Construction: Introduction; Process details; Box work, Built up.
- Moulded Construction: Introduction; Process details; Moulded gusset making; Other moulded construction.

E. MANUFACTURING OF SHANTINEKETAN LEATHER GOODS

- History-Classification-Material for leather goods making: Type of leather used and chemicals- Decorative dyes and its manufacturing—Embossing--- Dyeing and Finishing of components--Stitching: Hand stitching & Machine stitching.

• PRACTICAL

MANUFACTURING TECHNIQUES

Practicing the manufacturing of the following items:

- a. Wallet b. Purse c. Gents Pouch d. Tiffin Bag e. Watch Strap.

TEXT BOOKS:

1. The Leather Working Handbook - “A Practical Illustrated Source Book of Techniques and Projects” by *Valerie Micheal*. Cassell (Aug 01, 2006).
2. Leather Work - “A Manual of Techniques” by *Geoffrey West*. Crowood Press. New Edition (March 01, 2005).

MATERIAL STUDY (NON - LEATHER)

Subject Code	Course offered in	Course Duration	Contact Period Per Week	Full Marks
	2 nd Year 2 nd Semester	17 Weeks	3 Lecture	100

OBJECTIVE

- To make the students aware of leather substitutes for making various items where leather-like finish is required but the actual material is cost-prohibitive.

EXAMINATION SCHEME

Internal Assessment - 30 marks; End Semester Examination (ESE) - 70 marks.

Distribution of Internal Assessment marks:

Teacher's Assessment (TA) - 10 marks; Class Test (CT) - 20 marks.

S L N O	SUBJECT	CREDITS	PERIODS			EVALUATION SCHEME						
			L	TU	PR	INTERNAL SCHEME			ESE	TW	PR	TOTAL MARKS
						TA	CT	TOTAL				
4.	MATERIAL STUDY (NON-LEATHER)	3	3	-	-	10	20	30	70	-	-	100

DETAIL COURSE CONTENT

• END SEMESTER EXAMINATION

A. NON LEATHER MATERIALS

- Artificial Leathers.
- Leather Boards.
- Cellulose Board.
- Blended Board.

B. FABRICS

- Introduction,
- Fibers- its classification;
- Classification of Fabrics;
- Warp, Weft, Selvedge, loom movement in weaving;
- Basic Woven Designs- Plain weave, Twill weave, Drill weave, Satin Weave.

C. COATED FABRICS

- Introduction,
- Classifications of coated fabrics along with their physical and chemical properties;
- Production process of Coated fabrics;
- Applications in Leather Goods industry.

D. RUBBER

- Introduction and Origin;
- Use of different rubber products [Natural rubber, Solid rubber, MCR, Plantation Crepe; Resin rubber, Buna-N, Silicone rubber, Foam rubber, Buna-N];
- Composition of NR and its primary processing.

- Basic chemistry of vulcanization, compounding of rubber, different ingredients use in rubber compounding;
- Manufacturing process of TPR, Crepe Rubber [preparation, compounding, shaping, Vulcanization]

E. POLYMER

- Introduction, History, Classification of polymer, uses of different polymeric materials, Polymerization, Polymerization Technique[Addition, Condensation, Co-polymerization) Preparation and uses of different polymer like PVC, PU, EVA, PVA.

F. JUTE FABRICS

- Introduction and application of Jute fabrics.

TEXT BOOKS

1. "Comprehensive Footwear Technology" by *Somnath Ganguly*. ILTA, Kolkata Publications.
2. "Industrial Chemistry" by *B.K. Sharma*. Goel Publishing House, Meerut.

MACHINERIES FOR LEATHER GOODS - PART- I

Subject Code	Course offered in	Course Duration	Contact Period Per Week	Full Marks
	2 nd Year 2 nd Semester	17 Weeks	3 Lecture	100

OBJECTIVE

1. To understand the basic theory underlying machine learning.
2. To make the students acquainted with different machine operations and also with its various parts.
3. To be able to formulate machine learning problems corresponding to different applications.

EXAMINATION SCHEME

Internal Assessment - 30 marks and End Semester Examination (ESE) Marks - 70 marks.

Distribution of Internal Assessment marks:

Teacher's Assessment (TA) - 10 marks; Class Test (CT) - 20 marks.

S L N O	SUBJECT	CREDITS	PERIODS			EVALUATION SCHEME						
			L	TU	PR	INTERNAL SCHEME			ESE	TW	PR	TOTAL MARKS
						TA	CT	TOTAL				
5.	MACHINERIES FOR LEATHER GOODS - PART-I	3	3	-	-	10	20	30	70	-	-	100

DETAIL COURSE CONTENT

• END SEMESTER EXAMINATION

A. STITCHING MACHINE

Parts of Stitching Machine and their functions, Types of Stitching: Flat Bed, Post Bed, Cylinder Bed, Variable Stitch, Length Flat Machine, Under Edge Trimmer, Twine Needle Flat Machine, Zig-Zag machine. Material Transportation System in Stitching Machines (Drop Feed, Compound Feed, Unison Feed, Step Feed).

Needle – Definition, Parts of Needle and their role, Needle finishes, Needle systems, Needle Size, Classification of Needle on basis of Needle Point, Cutting Point [P, S, LR, PLR, PCR, D, D1, VR]; Number of Needles; Direction of Needle-bar movement.

Computerized Stitching Machine. Introduction and Operation.

B. MACHINERIES FOR CLICKING

Types of Clicking (Manual, Machine), Mechanical clicking press, Hydraulic clicking press, Hydraulic Clicking Press. Other Modern Clicking Machine [Fixed arm, Traveling head, Large beam , Flash Cutter etc], Comparison of Manual & Machine clicking, Some features of the Clicking Machine [voltage, oil tank, swinging arm, swing arm hand wheel, operation of the swing arm, cutting operation, hydraulic system, cutting board, day light etc.

Introduction to Die-less cutting system, Operation, and Machine adjustment.

C. MACHINERIES FOR SPLITTING

Function of Splitting Machine, Band knife Splitting Machine, Main features of Splitting Machine [Band knife, Pressure Roller, Feed Roller, Knife Adjustment Mechanism, Feed Roller, Adjustment Mechanism, Grinding wheel, Brush Roller etc].

D. MACHINERIES FOR SKIVING

Function of skiving Machine, Type of Skiving [Parallel, taper, center, Double edge, Double Groove], Type of Skiving Methods [Manual & Machine], Machine skiving [Single, Triple, Matrix], some features of skiving Machine [Bell Knife, Feed Roller, Knife Adjustment Mechanism, Feed Roller Adjustment Mechanism, Grinding Stone, Treadle, Scrap Suction Device etc], Comparison of Manual & Machine skiving, Setting skiving machine. Introduction to Automatic Skiving Machine, machine Adjustment, Operation.

E. STRAP CUTTING MACHINE.

F. STAMPING MACHINE.

G. THERMO FOLDING MACHINE.

H. CEMENTING MACHINE.

I. PERFORATING MACHINE.

• TEXT BOOKS

1. “Apparel Manufacturing Analysis” by *Solinger Jacob*. Columbia Bobin Media, 1988.
2. “The Technology of Cloth Manufacture” by *Harold Carr and Barbara Lathon*. Blackwell Sciences, 1996.
3. “Comprehensive Footwear Technology” by *Somenath Ganguly*. ILTA Kolkata Publications.

4. "Introduction to the Modern Footwear Technology" by *B. Venkatappaiah*. CLRI Publications.

ELEMENTS OF FASHION FORECASTING

Subject Code	Course offered in	Course Duration	Contact Period Per Week	Full Marks
	2 nd Year 2 nd Semester	17 Weeks	2 Lecture	50

OBJECTIVE

1. To impart knowledge to the participants for prediction of future trends and the consumer groups who will accept them.
2. To research and analyze current fashion trends.

EXAMINATION SCHEME

Internal Assessment - 15 marks and End Semester Examination (ESE) - 35 marks.

Distribution of Internal Assessment marks:

Teacher's Assessment (TA) - 5 marks; Class Test (CT) - 10 marks.

S L N O	SUBJECT	CREDITS	PERIODS			EVALUATION SCHEME						
			L	TU	PR	INTERNAL SCHEME			ESE	TW	PR	TOTAL MARKS
						TA	CT	TOTAL				
6.	ELEMENTS OF FASHION FORECASTING	2	2	-	-	5	10	15	35	-	-	50

DETAIL COURSE CONTENT

• END SEMESTER EXAMINATION

A. INTRODUCTION TO FASHION

Definition and why it is needed, terminologies, fashion cycle, consumer identification with fashion cycles, environment of fashion, theories of fashion adoption.

B. INTRODUCTION TO DESIGN

Design, concept of design, pattern types: Fabric design- natural, stylized, geometric, historic and abstract, design forecasting and trend estimation.

C. FASHION FORECASTING PROCESS

Forecasting of color, fabrics, and trends using various resources for fashion forecasting.

D. FASHION STYLING

Elements of Styling- accessing style and trend, achieve visual balance, making trends, working with color, color combination, color wheel, color characteristics, simultaneous contrast, lights and color, trend estimation, creating fashion.

E. HEURISTICS

Definition and its role.

F. RESEARCH PROCESS IN FORECASTING

Trend, color, fabrics, texture, design, market and seasons research.

DETAIL COURSE CONTENT

• PRACTICAL

A. WORKING WITH PHOTOSHOP

UNIT 1

Photoshop-History & introduction, the file menu, the tools, Drawing lines & shapes.

UNIT 2

Inserting picture and shapes, filling colors, text effects, working with layers, filters.

UNIT 3

Creating design patterns, Photoshop presentations -static & dynamic presentation.

B. DESIGNING USING COREL DRAW

UNIT 1

Corel draw –An overview, menus and tools.

UNIT 2

Drawing –lines, shapes .inserting-pictures, objects, tables, templates.

UNIT 3

Adding special effects, Exporting drawings, outlining & filling objects, inserting symbols & Clip arts.

UNIT 4

Working in Corel draw presentation –adjusting the position, resizing, positioning, merging, color shades & shadows .working with advanced effects, special interactive effects.

PRACTICE WITH COMPLETE LEATHER GOODS DRAWING (2D)

Each student is required to prepare leather goods Creative Design and a Logo of Company with their creative idea with the help of Photoshop and Corel Draw and build range.

INTRODUCTION TO 3D LEATHER GOODS DESIGNING.

• TEXT BOOKS:

1. M.Sc Software Engineering by *G. Dalin*. HSI PUBLICATIONS.

PROFESSIONAL PRACTICE - II

Subject Code	Course offered in	Course Duration	Contact Period Per Week	Full Marks
	2 nd Year 2 nd Semester	17 Weeks	2 Tutorial	50

OBJECTIVE

1. To acquire information from different source.
2. To prepare notes from given topic.
3. To present given topic in seminar.
4. To interact with peers to share thoughts.
5. To prepare a report on industrial visit, expert lecture.

EXAMINATION SCHEME

Practical-50 marks

Internal Assessment - 25 marks.

Distribution of Internal Assessment marks:

Internal Assignment - 10 marks; Seminar Presentation - 10 marks; Industry Visit Report - 5 marks.

External Assessment - 25 marks.

Distribution of Internal Assessment marks:

Seminar Presentation - 15 marks; Viva Voce - 10 marks.

S L N O	SUBJECT	CREDITS	PERIODS			EVALUATION SCHEME							
			L	TU	PR	INTERNAL SCHEME			ESE	TW	PR		TOTAL MARKS
						TA	CT	TOTAL			INT	EXT	
8.	PROFESSIONAL PRACTICE-II	2	-	2	-	-	-	-	-	-	25	25	50

DETAIL COURSE CONTENT

• PRACTICAL

Module - I

A.	Identification of different Non-Leather Materials.
B.	Identification of Fabrics.
C.	Identification of different types of Polymeric materials.

Module - II

A.	Hook shuttle assembly and needle bar section in lock stitch machine.
B.	Mechanisms of over lock and give the threading procedures for three thread machines.
C.	Mechanisms of over lock and give the threading procedures for five thread machines.
D.	Hook shuttle assembly and needle bar sections in flat lock machines
E.	Button Hole and Fixing machines- stitch mechanism, stitch length adjustment – gears
F.	Double needle Lock Stitch machine – mechanism, stitch formation.
G.	Mechanism of feed off the arm stitch machine
H.	Mechanism of Clicking Machine and changing different parameter
I.	Mechanism of Splitting Machine and changing different parameter
J.	Mechanism of Skiving Machine and changing different parameter
K.	Cutting and sharpening mechanisms in Strap cutting machine
L.	Operation and adjusting controlling parameter of Stamping, Thermo folding, Cementing, Perforating machine

Module - III

A.	INDUSTRY VISIT -Visit to Leather Goods Manufacturing Unit
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