

GOVERNMENT POLYTECHNIC MUMBAI

(Academically Autonomously Institute, Government of Maharashtra)

Teaching and Examination Scheme (P19)

With effect from AY 2019-20

Programme: Diploma in Leather Goods and Footwear Technology (Sandwich Pattern)Term / Semester - II

Course Code	Course Title	Teaching Hours/Contact Hours				Credits	Examination Scheme (Marks)						
		L	P	TU	Total		Theory			PR	OR	TW	Total
							TH	TS1	TS2				
HU 19103	Communication Practice	01	-	02	03	3	-	-	-	-	-	50	50
LG 19303	Graphical Pattern Design	0	4	-	04	4	00	00	00	50	-	50	100
LG 19403	Computer Design	0	4	-	04	4	00	00	00	50	-	50	100
LG 19204	WorkShop Practice (Open Footwear)-II	0	4	-	04	4	00	00	00	50	-	50	100
LG 19304	Leather Goods Designing	2	4	-	06	4	60	20	20	00	-	50	150
LG 19305	Principles of Post Tanning	3	6		09	9	60	20	20	50	-	00	150
	TOTAL	06	22	02	30	30	120	40	40	200		250	650
Student Centered Activity(SCA)					05								
Total Contact Hours					35								

Abbreviations: L- Theory Lecture, P-Practical, TU-Tutorial, TH- Theory Paper TS1 & TS2- Term Tests, PR-Practical, OR-Oral, TW: Term Work (progressive assessment)

* Indicates assessment by External Examiner else internal assessment, # indicates Self, on- line learning Mode, @ indicates on line examination

Note: Duration of Examination--TS1&TS2 -1 hour , TH- 2 hours, PR/OR – 3 hours per batch , SCA- Library - 1 hour, Sports- 2 hours, Creative Activity-2 hours

Coordinator,
Curriculum Development,
Department of Leather Technology

In-Charge
Curriculum Development Cell

Head of Departments
Department of Leather Technology

Principal

Programme : Diploma in Leather Goods & Footwear Technology (Sandwich Pattern)										
Course Code: HU19103				Course Title: Communication Practice						
Compulsory / Optional: Compulsory										
Teaching Scheme and Credits				Examination Scheme						
L	P	TU	Total	TH (2 Hrs 30 min)	TS1 (1 Hr)	TS2 (1Hr)	PR	OR	TW	Total
01	--	02	03	--	--	--	--	--	50	50

Abbreviations: L- Theory Lecture, P-Practical, TU-Tutorial, TH- Theory Paper TS1 & TS2- Term Tests, PR- Practical, OR-Oral, TW: Term Work (progressive assessment) , * Indicates assessment by External Examiner else internal practical skill test , # indicates Self, on- line learning Mode, @ indicates on line examination

Note: For Minimum passing marks under various heads, refer, examination rule AR 26.

Rationale:

In this age of globalization, competition is tough. Hence effective communication skills are important. Communication skills play a vital and decisive role in career development. The subject of Communication Practice gives practical knowledge about Telephone Etiquettes, Business Writing Skills, Vocabulary Building to prepare students handle different Communication situations in their industry. It also describes the non-verbal modes of Communication. It will guide and direct to develop a good personality and improve communication skills. Students will be able to utilize the skills necessary to be a competent communicator.

Course Outcomes: Student should be able to

CO1	Use correct vocabulary to communicate effectively in Modern world.
CO2	Apply proper telephone etiquettes during communication.
CO3	Interpret feedback at various situations by using appropriate body language in communication.
CO4	Write letters, reports and communicate effectively in written communication.
CO5	Use different kinds of speeches for different situations

Course Content Details:

Unit No	Topics / Sub-topics
1	Vocabulary Development 1.1 Words often confused, synonyms, antonyms, homophones 1.2 Importance Of Key words and Key points Course Outcome: CO1 Teaching Hours : 2 hrs Marks : 10 (R- 3, U-4, A-3)
2	Telephone Etiquettes 2.1 Do's & Don'ts of telephone etiquettes 2.2 How to transfer a call 2.3 How to take message on phone 2.4 Handling difficult customers 2.5 Advantages and disadvantages of over use of Telephone Course Outcome: CO2 Teaching Hours : 3 hrs Marks : 10 (R- 3, U-3, A-4)
3	Developing positive Body Language 3.1 Meaning & importance of Body language 3.2 Aspects of Body Language - Gestures, Postures, Eye contact, Dress code (formal, informal Communication ,purpose of uniform), Facial Expressions 3.3 Personality development 3.4 Difference between Positive & Negative body language Course Outcome: CO3 Teaching Hours : 4 hrs Marks : 10 (R- 2, U-4, A-4)
4	Business Correspondence 4.1 Job Application with resume. 4.2 Business Letters – a) Enquiry b)Order c)Complaint 4.3 Report Writing – a) Fall in Production b) Industrial visit report, C) Flow chart, Lay out guidelines, 4.4 E-mail writing Course Outcome: CO4 Teaching Hours : 4hrs Marks : 10 (R- 2, U-3, A-5)

5	Speech writing based on situations
	5.1 Types of Speeches
	a) Welcome Speech b) Farewell Speech c) Vote of Thanks d) Introducing a guest
	5.2 Tips on Effective Speech writing
Course Outcome: CO5 Teaching Hours : 2 hrs Marks : 10 (R- 2, U-4, A-4)	

Suggested Specifications Table (Theory)

Unit No	Topic Title	Distribution of Theory Marks			
		R Level	U Level	A Level	Total Marks
1	Vocabulary Development	3	4	3	10
2	Telephone Etiquettes	3	3	4	10
3	Developing positive Body Language	2	4	4	10
4	Business Correspondence	2	3	5	10
5	Speech writing based on situations	2	4	4	10
	Total	12	18	20	50

List of tutorials :

Sr. No	Unit No	COs	Title of the Tutorials	Hours
1	1	CO1 CO2	Vocabulary Building (Words often confused)	1
2	1	CO1 CO2	Vocabulary Building (Synonyms, antonyms, homophones)	1
3	2	CO2 CO1	Conversation on Telephone related to their field using role play method.	2
4	3	CO1	Poster Presentation Students will make poster/ collage showing positive &	2

		CO3	negative body language during communication	
5	4	CO1 CO4	Business Communication a) Advertisement, Tender, Diary writing. b) Job Application With Resume.	1
6	4	CO1 CO4	Report Writing A) Fall in Production Report B) Industrial Visit Report	1
7	5	CO1 CO5	Speeches- a)Welcome Speech b)Farewell Speech c) Vote of Thanks	2
8	--	CO1 CO5	Reading News paper Reading a news & Writing summary & presentation of it with the help of photographs, graphics related	2
9	--	CO3	Group Discussion	2
10	--	CO3 CO2	Mock Interview	2
11	--	CO3	Field communication, Need of Societies and description of different kinds of things.	2
12	--	CO1	Time management	2
13	All	All	Showing Videos, discussion on different types of Communication.	4
14	--	All	Power Point Presentation Students will prepare power point presentation on any topic of their interest.	4
15	--	CO1, CO3 CO2 CO5	Marketing Skills Students will do role play on selling products.	2
Total				30

Note: First ten tutorials are compulsory. Remaining tutorials are to be performed as per availability of time.

References/ Books:

Sr. No.	Title	Author, Publisher, Edition and Year Of publication	ISBN
1	Communication Skills	Joyeeta Bhattacharya - Reliable Series	9780000176981, 0000176982
2	Communication Skills	Sanjay Kumar, Pushpa Lata- Oxford University Press	13: 978-0199488803
3	Successful Presentation Skills	Andrew Brad bury- The Sunday Times	13: 9780749456627

E-References:

1. Website: www.mindtools.com/page8.html-99k
2. Website: www.inc.com/guides/growth/23032.html-4
3. Website: www.khake.com/page66htm/-72k
4. Website: [www.BMConsultantIndia.Com](http://www.BMConsultantIndia.com)
5. <https://www.vedantu.com/ncert-solutions/ncert-solutions-class-12-English>
6. MY CBSE GUIDE
7. Website: www.letstak.co.in
8. <https://learnenglishteens.britishcouncil.org/>

CO Vs PO and CO Vs PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	2	1	2	1	2	1	1	1	--	2
CO2	2	2	2	2	2	1	1	1	--	2
CO3	2	1	3	2	2	1	1	1	--	2
CO4	2	3	2	2	2	1	1	1	--	2
CO5	1	1	2	2	2	2	1	1	--	2

Industry Consultation Committee:

Sr. No	Name	Designation	Institute/Organisation
1	Mrs.Neelamkumar R Sawant	State Head Tech Services for Maharashtra & Goa	JSW Cement Ltd , Mumbai Head office
2	Mrs.S.S. Kulkarni	Lecturer in English	Government Polytechnic, Pune
3	Mrs. K.S.Pawar	Lecturer in English	Government Polytechnic, Mumbai
4	Ms. N.N.Dhake	Lecturer in English	Government Polytechnic, Mumbai

Coordinator,

Curriculum Development,

Department of Science And Humanities_____

I/C, Curriculum Development Cell

Head of Departments

Department of Science And Humanities_____

Principal



Programme : Diploma in Leather Goods And Footwear Technology(Sandwich Pattern)										
Course Code: LG 19204				Course Title: Work Shop Practice Open Footwear–II						
Compulsory / Optional: Compulsory										
Teaching Scheme and Credits				Examination Scheme						
L	P	TU	Total	TH (2 Hrs)	TS1 (1 Hr)	TS2 (1Hr)	PR	OR	TW	Total
00	04	00	04	--	--	-	50		50	100

Abbreviations: L- Theory Lecture, P-Practical, TU-Tutorial, TH- Theory Paper TS1 & TS2- Term Tests, PR-Practical, OR-Oral, TW: Term Work (progressive assessment) , * Indicates assessment by External Examiner else internal practical skill test , # indicates Self, on- line learning Mode, @ indicates on line examination

Note: For Minimum passing marks under various heads, refer, examination rule AR 26. Two practical skill test are to be conducted. First skill test at midterm and second skill test at the end of the term

Rationale:

This course is classified under the Core technology. Course Describe the facts, Concepts, principles & techniques of fancy advance designer open footwear technology. This course is widely growing technology due to this subject. Students can know the advance open footwear designing technique with experiments for open footwear fabrication; they will get the experience of construction and use of different advance designing hand tools which are always utilize in Footwear Industries

Course Outcomes: Student should be able to

CO1	Copying creative design of fancy human footwear.
CO2	Sketch the designer components for various human open footwear
CO3	Explain the various types of human open advance footwear last according design
CO4	Understand the variation in pattern and components ,machines for making human open footwear
CO5	Various Construction and bill of material for the fancy and advance open footwear fabrication
CO6	Costing of constructed various open footwear with the help of bill of material

Unit No	Topics / Sub-topics
1	1. Introduction of advance Human footwear 1.1. Copping creative design of fancy human footwear 1.2. Imagination of human foot for preparation of fancy open footwear 1.3. Differentiate between human foot and last 1.4. Differtiate between male and female footwear Course Outcome: CO1 Teaching Hours : 06hrs Marks: 00 (R- 0, U-0, A-0)
2	2. Introduction of open footwear last 2.1. Sketches according to theme of designing 2.2. Creation of sketched design 2.3. Creative male - Chappal ,sandal, flip flop,

	<p>2.4. Creative Female- Chappal , flat heel, large heel sandal</p> <p>Course Outcome: CO2 Teaching Hours : 04hrs Marks: 00 (R-0 , U-0 , A-0)</p>
3	<p>3. Selection of Human open footwear last</p> <p>3.1. Types of Male footwear last –flat heel last, bottom plate last</p> <p>3.2. Types of Female footwear last –Full wedge and semi wedge last, Louise heel last</p> <p>Course Outcome: CO3 Teaching Hours :04hrs Marks: (R- 0 , U-0 , A-0)</p>
4	<p>4. Introduction of importance of construction tools and machines require for male and female open footwear</p> <p>4.1. Pattern designing - Clicking pattern ,cutting pattern , folding pattern ,</p> <p>4.2. Insole pattern –preparation of creative insole and classification of Insole</p> <p>4.3. Sole pattern –preparation of sole pattern and classification of Sole</p> <p>4.4. Machine for upper making -clicking machine, skiving machine, flat bed sewing machine ,post bed sewing machine,</p> <p>4.5. Machine for bottom making -Sole pasting machine, buffing machine, re-activator , strap cutting and folding machine</p> <p>Course Outcome: CO 04 Teaching Hours : 04hrs Marks: (R-0 , U-0 , A-0)</p>
5	<p>5. Various Construction and bill of material for the fancy and advance open footwear fabrication</p> <p>5.1. Preparation of designing pattern and component according to sketch and construction methods</p> <p>5.2. Preparation of trial open footwear</p> <p>5.3. Upper construction- Cut edge construction, Folding construction, Turn edge construction,</p> <p>5.4. Bottom construction- Louise heel construction, Full wedge and semi wedge, classification of sole attachment</p> <p>5.5. Selection of material, Lining, Accessories, Grinders, Reinforcement material and machines</p> <p>5.6. Tabularized the measurable quantity of construction of footwear</p> <p>5.7. Preparation of Bill Of Material</p> <p>5.8. Flow chart of making upper and bottom from selected material and methods of construction, tools and machine</p> <p>Course Outcome: CO 05 Teaching Hours :36 hrs. Marks: (R-0 , U-0 , A-0)</p>
6	<p>6. Preparation of male and female open footwear</p> <p>6.1. Costing of prepared fancy footwear - Provisional costing</p> <p>6.2. Construction of various fancy open footwear</p> <p>6.3. ,Overhead expense</p> <p>6.4. Wastage</p> <p>6.5. Fixed costing ,variable costing , marginal costing, labour costing</p> <p>Course Outcome: Teaching Hours : 06hrs Marks: (R-0 , U-0 , A-0)</p>

List of experiments: Total 03 are compulsory

Sr. No.	Unit No	COs	Title of the Experiments	Hours
1	1	CO1	Selection of creative design for male open footwear	01
2	1	CO2	Sketches of selected creative design	01
3	1	CO3	Select the variation in male modular last Choose the male last for preparation of open footwear for construction, tools and machine knowledge	01
4	1	CO4	Prepare the insole according to selected last and design , Masking application for leather upper preparation for male open footwear and Prepare the component for male upper and bottom	01
5	1	CO5	Select the Material, Reinforcement, Accessories, Grinders and make component for making natural footwear's upper and bottom and preparation of bill of material and Construct the upper with bottom and finish	14
6	1	CO6	Costing	02
7	2	CO1	Selection of creative design for female open footwear	01
8	2	CO2	sketches of selected creative design	01
9	2	CO3	Select the variation in female modular last Choose the male last for preparation of open footwear for construction, tools and machine knowledge	01
10	2	CO4	Prepare the insole according to selected last and design , Masking application for leather upper preparation for female open footwear and Prepare the component for male upper and bottom	01
11	2	CO5	Select the Material, Reinforcement, Accessories, Grinders and make component for making natural footwear's upper and bottom and preparation of bill of material and Construct the upper with bottom and finish	14
12	2	CO6	Costing	02
13	3	CO1	Selection of creative design for female open footwear	01
14	3	CO2	Sketches of selected creative design	01
15	3	CO3	Select the variation in female modular last Choose the male last for preparation of open footwear for construction, tools and machine knowledge	01
16	3	CO4	Prepare the insole according to selected last and design , Masking application for leather upper preparation for male open footwear and Prepare the component for male upper and bottom	01
17	3	CO5	Select the Material , Reinforcement, Accessories, Grinders and make component for making natural footwear's upper and bottom and preparation of bill of material and Construct the upper	14

			with bottom and finish	
18	3	CO6	Costing	02
TOTAL				60

References/ Books:

Sr. No.	Title	Author, Publisher, Edition and Year Of publication	ISBN
1	Handbook of Footwear Design and Manufacture	Publisher: Wood head Publishing Ltd (28 Aug. 2013)	ISBN10: 082479673X ISBN-13: 978-0824796730
2	Complete Book of Shoes	by Marta Morales (Author) Publisher: Firefly Books Ltd (12 Sept. 2013)	ISBN-10: 1770851240 ISBN-13: 978-1770851245
3	Shoe Design	Publisher: Independently published (September 17, 2018) Language: Italian	ISBN-13: 978-1720070436 ISBN-10: 1720070431
4	Fashionary Shoe Design: A Handbook for Footwear Designers	Hardcover – 6 Jan 2015	
5	Shoe making and Creative Footwear Designs	Hardcover Publisher: Larsen and Keller Education, 2018	ISBN 10: 163549754X ISBN 13: 9781635497540

E-References:

<https://www.youtube.com/watch?v=ROd1Acma64o>
<https://www.youtube.com/watch?v=EM-D4CQc5Ok>
https://www.youtube.com/watch?v=B232n_tFEII
<https://www.youtube.com/watch?v=iC0RoNws64Q>
<https://www.youtube.com/watch?v=M2hHzOdVMps>
<https://www.youtube.com/watch?v=BQTV-iUFAI0>

CO Vs PO and CO Vs PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	2	1	2	1	2	1	1	2	2	1
CO2	2	2	2	2	2	1	1	2	2	1
CO3	2	1	3	2	2	1	1	1	1	2
CO4	2	3	2	3	2	1	1	3	3	3
CO5	1	1	3	3	3	2	1	3	3	3
CO6	1	3	2	3	2	2	1	3	3	3

Industry Consultation Committee:

Sr. No	Name	Designation	Institute/Organisation
1	S.G. Darveshi	Lecturer	Leather Goods And Footwear Technology Dept. Government Polytechnic ,Mumbai
2	M.B. Pol	Head Of The Department.	Leather Technology Dept. Government Polytechnic ,Mumbai
3	Abhishek Waghmare	Proprietor	Khetar India Footwear Industries, Taloja M.I.D.C Navi Mumbai
4	Sonam Singh	Fashion Illustrator Professor	International Institute In Fashion Designing ,Mumbai

Coordinator,

Curriculum Development,

Department of Leather Goods and Footwear
Technology

Head of Department

Department of Leather Goods and Footwear
Technology

I/C, Curriculum Development Cell

Principal

Programme : Diploma in Leather Goods And Footwear Technology(Sandwich Pattern)										
Course Code: LG 19 303				Course Title: Graphical Pattern Designing						
Compulsory / Optional: Compulsory										
Teaching Scheme and Credits				Examination Scheme						
L	P	TU	Total	TH (2 Hrs)	TS1 (1 Hr)	TS2 (1Hr)	PR	OR	TW	Total
00	04		04	-	-	-	50	--	50	100

Abbreviations: L- Theory Lecture, P-Practical, TU-Tutorial, TH- Theory Paper TS1 & TS2- Term Tests, PR-Practical, OR-Oral, TW: Term Work (progressive assessment) , * Indicates assessment by External Examiner else internal practical skill test , # indicates Self, on- line learning Mode, @ indicates on line examination

Note: For Minimum passing marks under various heads, refer, examination rule AR 26. Two practical skill test are to be conducted. First skill test at midterm and second skill test at the end of the term

Rationale:

This is an introductory class which will expose the student to a number of traditional skills and ideas that have occupied artists throughout Graphical Pattern Designing skill. The class involves drawing from direct observation with an emphasis on linear methods with Geometrical construction perspective, and other basic techniques and concepts. The student is expected to develop disciplined work habits, Technical Illustration as skills, creation, self-expression, personal style, understanding to visualize a required sketching.

Course Outcomes: Student should be able to

CO1	Understand the Elements of Geometrical Construction on plane surface
CO2	Understand the technical, conceptual and creative design skills
CO3	Communicate ideas and concepts through various visualized drawing arts
CO4	Apply the various of illustration of the selected object
CO5	Application for various creative designing tools
CO6	Fabricate The concept in Graphical pattern designing component

Unit No	Topics / Sub-topics
1	Geometrical Construction Scale and Proportion, Unit Formulae, Purpose of geometrical construction, guideline Division of a line segment into required number of equal parts proportional line, Perpendicular lines, Parallel lines , Bisection of an angle, Trisection of a right , straight angle, Congruent angle , Bisector of an arc , center of an arc, draw an arc of given radius s Regular polygons, volume, Abbreviation and symbols, Technical

	lettering like ABCD TO Z Drawing in line form, Course Outcome: CO1 Teaching Hours :05 hrs Marks: (R- 0 , U-0 , A-0)
2	Creative drawing Imagination drawing ,Drawing from image, Colorful drawing, Functional drawing , Seasonable drawing, shape Shading ,Differentiate between illustration and drawing, Course Outcome: CO 02 Teaching Hours :10 hrs Marks: (R-0 , U-0 , A-0)
3	Study of Colour Creation of natural filling in visualization, variation in styling , Classification of Colour Primary Colour .Secondary Colour, Tertiary Colour , Intermediate Colour ,Texture Colour Dimension of Colour- Intensity of Colour Wheel Course Outcome: CO 03 Teaching Hours: 10 hrs. Marks: (R-0 , U-0 , A-0)
4	Introduction to Designing Principle Types of Design-Structural Designing (Shape of Designing), Decorative Designing, Designing Composition, Scale and Proportion of Design, Illusion of Designing- Pattern, Light ,Reflection, Variation in Shades, Highlights and Shadows Course Outcome: CO 04 Teaching Hours: 05 hrs. Marks: (R-0 , U-0 , A-0)
5	Foundation of Projection -Isometric Projection, Orthographic or Multi view Projection, Dimensioning. And scaling of projection, Sectioning. Projection The Five Basic Skills of Drawing -The Perception of Edges. The Perception of Spaces. , The Perception of Relationships. The Perception of Light & Shadow. The Perception of the Whole or Gestalt. Course Outcome: CO 05 Teaching Hours : 15 hrs. Marks: (R-0 , U-0 , A-0)
6	Application of Graphical Pattern Designing Fabrication of the designer pattern with pattern paper Leather Goods-wallets, Shopping Bags, office bag, Passport cover, Creative Key case Course Outcome: CO 06 Teaching Hours: 15 hrs. Marks: (R-0 , U-0 , A-0)

List of experiments: Total 05 experiments are compulsory

Sr. No.	Unit No	COs	Title of the Experiments	Hours
1	1	CO1	Selection Creative pattern Design of Wallet	01
2	1	CO2	Understand the measurement of the selected wallet	02
3	1	CO3	Notification of efficient measurement of Internal and external component	02
4	1	CO4	Study of creativity, Colour Combination and Texture of the articles	01
5	1	CO5	Distribution of the Component by the projection	03
6	1	CO6	Cutting the pattern according to graphical measurement and fabricate	03
7	2	CO1	Selection Creative pattern Design of Shopping bag	01

8	2	CO2	Understand the measurement of the selected Shopping bag	02
9	2	CO3	Notification of efficient measurement of Internal and external component	02
10	2	CO4	Study of creativity, Colour Combination and Texture of the articles	01
11	2	CO5	Distribution of the Component by the projection	03
12	2	CO6	Cutting the pattern according to graphical measurement and fabricate	03
13	3	CO1	Selection Creative pattern Design of Office Bag	01
14	3	CO2	Understand the measurement of the selected Office Bag	02
15	3	CO3	Notification of efficient measurement of Internal and external component	02
16	3	CO4	Study of creativity, Colour Combination and Texture of the articles	01
17	3	CO5	Distribution of the Component by the projection	03
18	3	CO6	Cutting the pattern according to graphical measurement and fabricate	03
19	4	CO1	Selection Creative pattern Design of Passport Cover	01
20	4	CO2	Understand the measurement of the selected Passport Cover	02
21	4	CO3	Notification of efficient measurement of Internal and external component	02
22	4	CO4	Study of creativity, Colour Combination and Texture of the articles	01
23	4	CO5	Distribution of the Component by the projection	03
24	4	CO6	Cutting the pattern according to graphical measurement and fabricate	03
25	5	CO1	Selection Creative pattern Design of Creative Key Case	01
26	5	CO2	Understand the measurement of the selected Creative Key Case	02
27	5	CO3	Notification of efficient measurement of Internal and external component	02
28	5	CO4	Study of creativity, Colour Combination and Texture of the articles	01
29	5	CO5	Distribution of the Component by the projection	03
30	5	CO6	Cutting the pattern according to graphical measurement and fabricate	03
			TOTAL	60

References/ Books:

Sr. No.	Title	Author, Publisher, Edition and Year Of publication	ISBN
1	Foundation of Art and design	Ar. Pranav Bhatt ,The Lakhani book depot, Mumbai	ISBN13-1234567153871
2	Pencil drawing technique	David Lewis Published by Paper pack	ISBN 13-9780823039913
3	How To Draw	Amit offir Published by troubadour; 1 edition (6 January 2014)	ASIN: B00C7RPT2I

E-References:

1. https://en.wikibooks.org/wiki/Drafting/Freehand_Drawing
2. <https://www.freepik.com/free-photos-vectors/hand-drawing>
3. <https://www.quora.com/What-is-free-hand-drawing>
4. <https://www.youtube.com/watch?v=AAMOil8BRPo>
5. <https://www.youtube.com/watch?v=l5WLMPCkpUA>
6. https://www.youtube.com/watch?v=yIQA_f47NNA
7. <https://www.youtube.com/watch?v=oPDYnpTvqVo>
8. <https://www.youtube.com/watch?v=s1k2ldxRNTI>
9. https://www.youtube.com/watch?v=g_Fce-fo0JA
10. <https://www.youtube.com/watch?v=M2hHzOdVMps>

CO Vs PO and CO Vs PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	2	1	2	1	2	1	1	2	2	1
CO2	2	2	2	2	2	1	1	2	2	1
CO3	2	1	3	2	2	1	1	1	1	2
CO4	2	3	2	3	2	1	1	3	3	3
CO5	1	1	3	3	3	2	1	3	3	3
CO6	1	3	2	3	2	2	1	3	3	3

Industry Consultation Committee:

Sr.No	Name	Designation	Institute/Organisation
1	S.G. Darveshi	Lecturer	Leather Goods And Footwear Technology Dept. Government Polytechnic ,Mumbai
2	M.B. Pol	Head Of The Department.	Leather Technology Dept. Government Polytechnic ,Mumbai
3	Sonam Singh	Fashion Illustrator Professor	International Institute In Fashion Designing ,Mumbai
4	Pratiksha Suryawanshi	Visiting Lecturer	Leather Goods And Footwear Technology Dept. Government Polytechnic ,Mumbai

Coordinator,

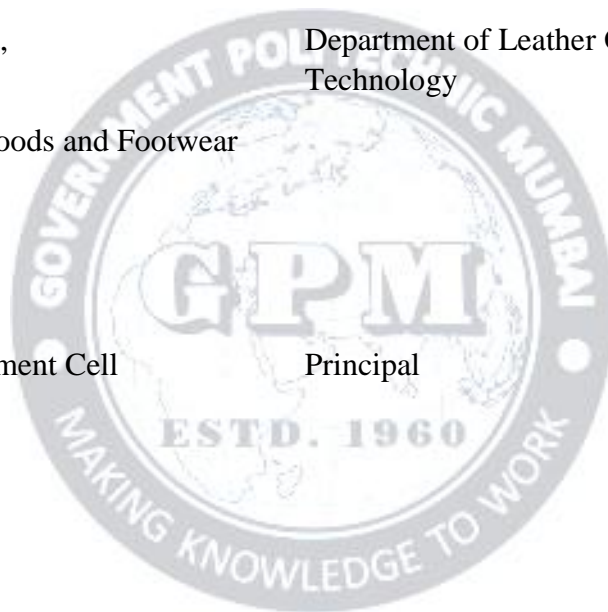
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TechnologyDepartment of Leather Goods and Footwear
Technology

I/C, Curriculum Development Cell

Principal





Programme : Diploma in Leather Goods And Footwear Technology (Sandwich Pattern)										
Course Code: LG 19304				Course Title: Leather Goods Designing						
Compulsory / Optional: Compulsory										
Teaching Scheme and Credits				Examination Scheme						
L	P	TU	Total	TH (2.30 Hrs.)	TS1 (1 Hr.)	TS2 (1Hr)	PR	OR	TW	Total
02	04	-	06	60	20	20	-	-	50	150

Abbreviations: L- Theory Lecture, P-Practical, TU-Tutorial, TH- Theory Paper TS1 & TS2- Term Tests, PR-Practical, OR-Oral, TW: Term Work (progressive assessment) , * Indicates assessment by External Examiner else internal practical skill test , # indicates Self, on- line learning Mode, @ indicates on line examination

Note: For Minimum passing marks under various heads, refer, examination rule AR 26. Two practical skill test are to be conducted. First skill test at midterm and second skill test at the end of the term.

Rationale:

This course is classified under the applied technology. Course Describe the facts, Concepts, principles & techniques of leather goods designing. This course is widely growing technology due to this subject. Students can know the designing concept according to need and fashion which are useful for Leather goods Industry. They knowing the use of different tools and equipment which are utilize Leather goods Industry

Course Outcomes: Student should be able to

CO1	Illustrate creative design of various leather goods
CO2	Understand the Creation of designer pattern and components
CO3	Classify the various leather goods according design
CO4	Selection of leather and lining material for making leather goods
CO5	Selection of Reinforcement material Accessories, Grinders, for making leather goods
CO6	Machineries tools and Construction for various leather goods

Unit No	Topics / Sub-topics
1	1. Introduction of creative design of various leather goods 1.1. Coping creative design of leather goods 1.2. Imagination of preparation of various Leather Goods 1.3. Sketches according to theme of designing 1.4. Creation of sketched design Course Outcome: CO1 Teaching Hours: 04 hrs. Marks: 10 (R- 02, U-04, A-04)

2	<p>2. Creative designing of leather goods</p> <p>2.1. Design concept and fashionable construction</p> <p>2.2. Methods of development of creativity</p> <p>2.3. Roll of Free hand Drawing and Pattern Designing</p> <p>2.4. Geometrical Construction</p> <p>2.5. Colour combination</p> <p>2.6. Creativity in Selection of material, accessories and grinders for fashion</p> <p>2.7. Pattern designing - Clicking pattern ,fixed pattern</p> <p>Course Outcome:CO3 Teaching Hours :04hrs Marks: 10 (R-02 , U-04 ,A-04)</p>
3	<p>3. Classification of Leather Goods</p> <p>3.1. Small leather goods or personal leather goods, -wallet , pouch, pass port cover, ID cover, Cheque book Cover, Credit Card Cover</p> <p>3.2. Medium leather goods, , Shopping Bag, Laptop ,Bag, Office Bag</p> <p>3.3. Heavy leather/luggage goods, - Travelling Bag ,Gym Bag, Sports Bag ,Pilot Bag, Adventure riding bag</p> <p>3.4. Ladies handbags, Loose bag, Shoulder Bag carrying bag,</p> <p>3.5. Fancy Leather Goods Crafted small and medium leather Goods</p> <p>Course Outcome: CO2Teaching Hours :04hrs Marks:08 (R-04 , U-04, A-00)</p>
4	<p>4. Selection of leather and non-leather material and lining material</p> <p>4.1. List of finished Leather for Leather goods</p> <p>4.2. Characteristics of Leather For small Leather Goods, medium Leather Goods, heavy Leather Goods</p> <p>4.3. Lining. Fabric Linings, Leather Linings, Synthetic Linings</p> <p>Course Outcome: CO2Teaching Hours :04hrs Marks:10 (R-04 , U-04, A-02)</p>
5	<p>5. Reinforcement material Accessories, Grinders, and ,machine for making leather goods</p> <p>5.1. Re-enforcement Material for Leather goods, Drawing paper, Foam Sponge, Eva sheet, Crape Rubber, Plywood, Rope, Piping wire, Fiber sheet, , Metal sheet, Mill board , Straw Board</p> <p>5.2. Accessories ,-Fitting, Locks, Frame, Straps fitting, Ring, Belts and buckles, Roller buckles, Adjustable buckles, , Gussets fitting, Handle fitting, D-plate, Handles, Hooks, Key hooks, Dog hooks, Hinges, Clips, Fasteners, Rivets, Buttons, Eyelets, Studs, Purse button, Zips , Ornaments</p> <p>5.3. Grinders –</p> <p>5.3.1. Adhesive-Natural Adhesive, -Vegetable origin, Latex</p> <p>5.3.2. Animal origin- Glue,</p> <p>5.3.3. Manmade Adhesive- Neoprene based Adhesive,</p> <p>5.4. Thread –</p> <p>5.4.1. Natural thread - Cotton Thread, Woolen Thread, Silk Thread, Jute , Thread,</p>

	<p>5.4.2. Manmade thread- Polyester thread, Nylon thread</p> <p>5.5. Twisting of thread-Two ply Thread, Three ply Thread , Various Numbers of thread and their uses</p> <p>5.6. Zip and Fastener-</p> <p>5.6.1. Various material of zipper, Sizes of zipper and their uses</p> <p>5.6.2. Various material of fastener, Sizes of fastener and their uses</p> <p>Course Outcome:CO5 Teaching Hours : 08hrs Marks:10 (R-04, U-04 , A-02)</p>
6	<p>6. Machineries tools and Construction for leather Goods</p> <p>6.1. Machine-Flat bed Sewing Machine ,Post bed Sewing Machine ,Cylinder bed Sewing machine ,Embroidery sewing machine ,Skiving machine ,Splitting a machine Clicking machine clicking dies, Ironing press</p> <p>6.2. Tools- Designing tools –Measuring Tape, T-square ,French curve, Scale , Pattern patter</p> <p>6.3. Cutting tools-Clicking knife, scissor, Thread trimmer,</p> <p>6.4. Punching tools-hole punch-Awl, pointer,</p> <p>6.5. Construction- cut edge construction, fold edge construction, turn edge construction</p> <p>6.6. Preparation of pre assembling programmer chart Skiving Chart, Marking Chart, Stitching Chart, Folding Chart</p> <p>6.7. Costing for leather goods manufacturing</p> <p>6.8. Units and formulae and for measurement</p> <p>6.9. Provisional costing ,Variable costing ,Marginal costing, Machines cost, Labour cost, Fixed costing, Wastage, overhead expense</p> <p>Course Outcome: CO6 Teaching Hours:06 hrs. Marks: 12 (R-04,U-04, A-04)</p>

Suggested Specifications Table (Theory):

Unit No	Topic Title	Distribution of Theory Marks			
		R Level	U Level	A Level	Total Marks
1	Introduction of creative design of various leather goods	02	04	04	10
2	Creative designing of leather goods	02	04	04	10
3	Classification of Leather Goods	04	04	00	08
4	Selection of leather and non-leather material and lining material	04	04	02	10
5	Reinforcement material Accessories, Grinderries, and , machine for making leather goods	04	04	02	10
6	Machineries tools and Construction	04	04	04	12
Total		20	24	16	60

List of the Experiment 05 are compulsory

Sr. No.	Unit No	COs	Title of the Experiments	Hours
1	1	CO1	Copy design of design of ID Cover	01
2	1	CO2	Creative designing of ID Cover	01
3	1	CO3	Selection of leather for making ID Cover	01
4	1	CO4	Selection of leather and non-leather material and lining material	01
5	1	CO5	Reinforcement material Accessories, Grinders, and , machine for making ID Cover	01
6	1	CO6	Machineries tools and Cut edge Construction for ID Cover	07
7	2	CO1	Copy design of design of Visiting card Cover	01
8	2	CO2	Creative designing of Visiting card Cover	01
9	2	CO3	Selection of leather for making Visiting card Cover	01
10	2	CO4	Selection of leather and non-leather material and lining material	01
11	2	CO5	Reinforcement material Accessories, Grinders, and , machine for making Visiting card Cover	01
12	2	CO6	Machineries tools and Fold and Turn edge Construction for Visiting card Cover	07
13	3	CO1	Copy design of design of Key case	01
14	3	CO2	Creative designing of Key case	01
15	3	CO3	Selection of leather for making Key case	01
16	3	CO4	Selection of leather and non-leather material and lining material	01
17	3	CO5	Reinforcement material Accessories, Grinders, and , machine for making Key case	01
18	3	CO6	Machineries tools and Cut edge Construction for Key case	07
19	4	CO1	Copy design of design of simple wallet	01
20	4	CO2	Creative designing of simple wallet	01
21	4	CO3	Selection of leather for making simple wallet	01
22	4	CO4	Selection of leather and non-leather material and lining material	01
23	4	CO5	Reinforcement material Accessories, Grinders, and , machine for making simple wallet	01
24	4	CO6	Machineries tools and Construction for simple wallet	07
25	5	CO1	Copy design of design of Pass port cover	01

26	5	CO2	Creative designing of Pass port cover	01
27	5	CO3	Selection of leather for making Pass port cover	01
28	5	CO4	Selection of leather and non-leather material and lining material	01
29	5	CO5	Reinforcement material Accessories, Grinders, and , machine for making Pass port cover	01
30	5	CO6	Machineries tools and Construction for Pass port cover	07
			TOTAL	60

References/ Books:

Sr. No.	Title	Author, Publisher, Edition and Year Of publication	ISBN
1	Manual for leather goods	Uploaded by statesman	
2	Leather Goods Design (Manual & CAD)	CSIR-Central Leather Research Institute,	
3	Insider guideline for leather Crafting		ISBN-13 : 9781497203464
4	Leatherwork For Beginners: Your Practical Guide to Leather crafting	Kindle Edition via Amazon	ISBN-10: 1542835712; ISBN-13: 978-1542835718;
5	Making Leather Handbags and Other Stylish Accessories	• Publisher: Rockport Publishers Inc. (29 October 2004) Language: English	ISBN-10: 1592530761 ISBN-13: 978-1592530762
6	Bag Design		SBN: 978-988-77108-0-6
7	Handmade Leather Bags & Accessories [Paperback]	Publication 2013/11 Publisher- Design Originals (US)	ISBN 9781574217162

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2. <https://www.youtube.com/watch?v=4eQtdH6M0uo>
3. https://www.youtube.com/watch?v=Xt7ZD1Da_js
4. <http://www.leatherworker.net>
5. <https://www.youtube.com/watch?v=YdihgoTGMnk>
6. <https://www.youtube.com/watch?v=iuYf93IVSfU>

CO Vs PO and CO Vs PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	2	3	2	3	1	-	-	1	1	1
CO2	2	3	1	3	-	-	-	1	1	1
CO3	2	3	3	2	-	2	-	1	-	-
CO4	1	2	1	3	-	-	-	2	1	1
CO5	-	3	3	2	-	1	1	2	1	1
CO6	1	1	2	2	2	1	1	1	1	1

Industry Consultation Committee:

Sr.No	Name	Designation	Institute/Organisation
1	S.G. Darveshi	Lecturer	Leather Goods And Footwear Technology Dept. Government Polytechnic ,Mumbai
2	M.B. Pol	Head Of The Department.	Leather Technology Dept .Government Polytechnic ,Mumbai
3	Shweta Shivdas	Visiting Lecturer	Leather Goods And Footwear Technology Dept. Government Polytechnic ,Mumbai
4	Sonam Singh	Fashion Illustrator Professor	International Institute In Fashion Designing ,Mumbai

Coordinator,

Curriculum Development,

Department of Leather Goods and Footwear
Technology

Head of Department

Department of Leather Goods and Footwear
Technology

I/C, Curriculum Development Cell Principal

Programme : Diploma in Leather Goods And Footwear Technology (Sandwich Pattern)										
Course Code: LG 19 403				Course Title: Computer Design						
Compulsory / Optional: Compulsory										
Teaching Scheme and Credits				Examination Scheme						
L	P	TU	Total	TH (2.30 Hrs)	TS1 (1 Hr)	TS2 (1Hr)	PR	OR	TW	Total
00	04		04	-	-	-		--	50	100

Abbreviations: L- Theory Lecture, P-Practical, TU-Tutorial, TH- Theory Paper TS1 & TS2- Term Tests, PR-Practical, OR-Oral, TW: Term Work (progressive assessment) , * Indicates assessment by External Examiner else internal practical skill test , # indicates Self, on- line learning Mode, @ indicates on line examination

Note: For Minimum passing marks under various heads, refer, examination rule AR 26. Two practical skill test are to be conducted. First skill test at midterm and second skill test at the end of the term

Rationale:

This Course designed by industry expert based on all real time requirements of industries, backed by practical work in the Computer designing lab assistance, experienced working professional to gain the knowledge of current and upcoming trend in graphic design. This course cover today's best topic and application including Photoshop, Illustrator, and vector based Corel Draw for Design and Visualization concept. It help create designing or to develop, can be enlarged to any size without any distortion in quality. Or do creativity by copying designing. Creation, self-expression, personal style, understanding to visualize a required sketching. Help to create ads or collateral for print or for the web

Course Outcomes: Student should be able to

CO1	Understand the object of Computer designing concept
CO2	Understand the Measurable, technical, conceptual and creative design skills
CO3	Implementation of crated ideas and concepts through various Objective
CO4	Apply the various of illustration of the selected object
CO5	Application for various computer designing Layers
CO6	Finalize the concept in computer designing component in printout form,

Unit No	Topics / Sub-topics
1	1. Introduction of Computer design 1.1. Computer design- visual concepts, ideas, inspiration, development of layout and production design Course Outcome: CO1 Teaching Hours: 05 hrs. Marks: (R- 0 , U-0 , A-0)

2	<p>2. Geometrical measurement</p> <p>2.1. Exploring the User Interface, Working with Basic Geometric Figures ,Undoing & Redoing of Actions ,Working with Page Layout</p> <p>2.2. Working with Lines, Outlines & Shapes</p> <p>2.3. Drawing curves using lines ,Working with Outlines ,Working with Brush Strokes , Modifying Basic shapes ,Exploring Grid & Guidelines ,Performing advanced operations with line objects</p> <p>Course Outcome: CO 02 Teaching Hours: 10 hrs. Marks: (R-0 , U-0 , A-0)</p>
3	<p>3. Working with Objects</p> <p>3.1. Handling Objects in CorelDraw ,Creating an outline around an object ,Positioning Objects, Aligning & Distributing Objects , Sizing & Scaling Objects , Creating Graphical Special Effects ,</p> <p>3.2. Working with Colors & Filling Objects</p> <p>3.3. Creating a Custom Color Palette , Editing a Custom Color Palette ,</p> <p>3.4. Introduction to Tables</p> <p>3.5. Adding a table , Inserting and deleting , Table rows & columns , Formatting Table</p> <p>Course Outcome: CO 03 Teaching Hours : 10 hrs. Marks: (R-0 , U-0 , A-0)</p>
4	<p>4. Working with Text</p> <p>4.1. Creating Different types of text , Changing the Appearance of Text , Finding & Replacing text , Applying Effects to Text , Fitting text to an object's Path ,File Management Setting Up the Page , Moving Around and Viewing Drawings ,Moving Around the Current Page ,Viewing Modes , Inserting and Deleting Pages ,Changing Page</p> <p>4.2. Customizing Options- Using Multiple Workspaces , Customizing the Tool bars ,Using Shortcuts keys , Saving Defaults ,Setting File Backups</p> <p>Course Outcome: CO 04 Teaching Hours: 05 hrs. Marks: (R-0 , U-0 , A-0)</p>
5	<p>5. Working with Layers</p> <p>5.1. Creating a layer, Changing layer properties , Moving objects between layers ,Deleting a layer</p> <p>5.2. Working with Bitmaps-Understanding the image types , Working with Bitmap & Vector ,Images Importing a Bitmap , Modifying a Bitmap , Tracing Bitmaps</p> <p>Course Outcome: CO 05 Teaching Hours : 15 hrs. Marks: (R-0 , U-0 , A-0)</p>
6	<p>6. Projects in Print out form</p> <p>6.1. Logos, Copy design, Create design, 2D Design, 3d Design , Prospects, Envelope , Packaging Cover , etc.</p> <p>6.2. Advertisements, brochures, magazines, and corporate designing perspectives</p> <p>Course Outcome: CO 06 Teaching Hours : 15 hrs Marks: (R-0 , U-0 , A-0)</p>

List of experiments: Total 05 are compulsory

Sr. No.	Unit No	COs	Title of the Experiments	Hours
1	1	CO1	Selection of copy design concept	01
2	1	CO2	Understand the measurement of copy design concept	02
3	1	CO3	Notification of efficient measurement of copy design concept	02
4	1	CO4	Study of variation and Creativity, Colour Combination and Texture of copy design concept	01
5	1	CO5	Distribution of newly layering of the copy design concept	03
6	1	CO6	Print out form of newly created copy design concept	03
7	2	CO1	Selection of creative design concept	01
8	2	CO2	Understand the measurement of creative design concept	02
9	2	CO3	Notification of efficient measurement of creative design concept	02
10	2	CO4	Study of variation and Creativity, Colour Combination and Texture of creative design concept	01
11	2	CO5	Distribution of newly layering of the creative design concept	03
12	2	CO6	Print out form of newly created creative design concept	03
13	3	CO1	Selection of Logo	01
14	3	CO2	Understand the measurement of Logo	02
15	3	CO3	Notification of efficient measurement of Logo	02
16	3	CO4	Study of variation and Creativity, Colour Combination and Texture of Logo	01
17	3	CO5	Distribution of newly layering of the Logo	03
18	3	CO6	Print out form of newly created Logo	03
19	4	CO1	Selection of Photo	01
20	4	CO2	Understand the measurement of Photo	02
21	4	CO3	Notification of efficient measurement of Photo	02
22	4	CO4	Study of variation and Creativity, Colour Combination and Texture of Photo	01
23	4	CO5	Distribution of newly layering of the Photo	03
24	4	CO6	Print out form of newly created Photo	03
25	5	CO1	Selection of Brochure	01
26	5	CO2	Understand the measurement of Brochure	02

27	5	CO3	Notification of efficient measurement of Brochure	02
28	5	CO4	Study of variation and Creativity, Colour Combination and Texture of Brochure	01
29	5	CO5	Distribution of newly layering of the Brochure	03
30	5	CO6	Print out form of newly created Brochure	03
			TOTAL	60

References/ Books:

Sr. No.	Title	Author, Publisher, Edition and Year Of publication	ISBN
1	Foundation of Art and design	Ar. Pranav Bhatt ,The Lakhani book depot, Mumbai	ISBN13-1234567153871
2	Pencil drawing technique	David Lewis Published by Paper pack	ISBN 13-9780823039913
3	How To Draw	Amit of fir Published by troubadour; 1 edition (6 January 2014)	ASIN: B00C7RPT2I

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- Adobe Photoshop.
- Adobe InDesign.
- Corel Draw
- www.inspire.pinterest.com
- <https://www.youtube.com/watch?v=TpbFHCEvnpY>
- <https://www.youtube.com/watch?v=9R0HTdtaTRQ>
- <https://www.youtube.com/watch?v=jcAKb2ae4l8>
- <https://www.youtube.com/watch?v=fsMdt0-U8Vk>
- <https://www.youtube.com/watch?v=wVqoe17pmiY>

CO Vs PO and CO Vs PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	2	1	2	1	2	1	1	2	2	1
CO2	2	2	2	2	2	1	1	2	2	1
CO3	2	1	3	2	2	1	1	1	1	2
CO4	2	3	2	3	2	1	1	3	3	3
CO5	1	1	3	3	3	2	1	3	3	3
CO6	1	3	2	3	2	2	1	3	3	3

Industry Consultation Committee:

Sr. No	Name	Designation	Institute/Organisation
1	S.G. Darveshi	Lecturer	Leather Goods And Footwear Technology Dept. Government Polytechnic ,Mumbai
2	M.B. Pol	Head Of The Department.	Leather Technology Dept. Government Polytechnic ,Mumbai
3	Shweta Shivdas	Visiting Lecturer	Leather Goods And Footwear Technology Dept. Government Polytechnic ,Mumbai
4	Pratiksha Suryawanshi	Visiting Lecturer	Leather Goods And Footwear Technology Dept. Government Polytechnic ,Mumbai

Coordinator,

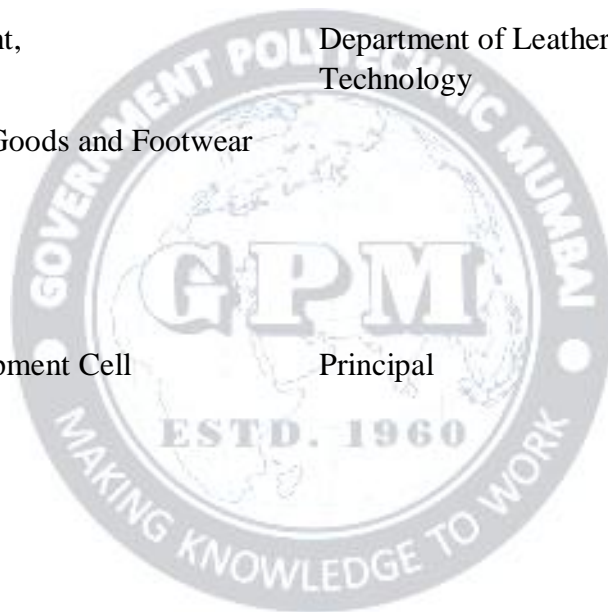
Head of Department

Curriculum Development,

Department of Leather Goods and Footwear
TechnologyDepartment of Leather Goods and Footwear
Technology

I/C, Curriculum Development Cell

Principal



Programme : Diploma in Leather Goods And Footwear Technology(Sandwich Pattern)										
Course Code: LG 19305				Course Title: Principles Of Post Tanning						
Compulsory / Optional: Compulsory										
Teaching Scheme and Credits				Examination Scheme						
L	P	TU	Total	TH (2.30 Hrs.)	TS1 (1 Hr)	TS2 (1Hr)	PR	OR	TW	Total
03	06	-	09	60	20	20	50	-	-	150

Abbreviations: L- Theory Lecture, P-Practical, TU-Tutorial, TH- Theory Paper TS1 & TS2- Term Tests, PR-Practical, OR-Oral, TW: Term Work (progressive assessment) , * Indicates assessment by External Examiner else internal practical skill test , # indicates Self, on- line learning Mode, @ indicates on line examination

Note: For Minimum passing marks under various heads, refer, examination rule AR 26. Two practical skill test are to be conducted. First skill test at midterm and second skill test at the end of the term

Rationale:

This course is classified under the applied technology. Course Describe the facts, Concepts, principles & techniques of leather manufacturing after tanning operation to crust .The student get an idea of tanned leather, Grading of tanned leather for final finished leather.

There are various application are done during process with the use of various machineries referred as Post tanning operation from re tanning operation to crusting. This processed is also called Wet End process. Post tanning operation make the base of final finished leather It helps to understand the properties about natural and mineral tanned leather along with synthetic tanning and various dyes, fat liquoring to develop various properties for final finished leather

Course Outcomes: Student should be able to

CO1	Understand the object of combination tanning. properties before post tanning operation
CO2	Understand to plan Mechanical operations and Role of Machine for post tanning operation
CO3	Decide the role of various tanning reagent, synthetic tanning agent , dyes, fat liquor , chemicals in efficient manner
CO4	Probable achievement about the properties of the wet end leather (crust) leather
CO5	Confirmation of the various stages of process in the post tanning operation
CO6	Pre-plan the further process after post tanning operation and gradation (post crusting operation)

Unit No	Topics / Sub-topics
1	1. Object of Combination tanning , 1.1. Combination tanning, Re-chroming, Semi-chrome Leather ,Chrome retanning, Chrome alum retanning , Oil-vegetable tanning 1.2. Physical & chemical Changes due to various combination tanned leather

	Course Outcome: CO1 Teaching Hours: 06 hrs Marks: 08 (R- 04, U-04, A-0)
2	2. Mechanical operations and Role of Machine for post tanning operation Sammying Machine , Splitting Machine ,Shaving Machine ,Crusting drum Setting Machine, Vacuum drier , Conveyer, Staking, Toggling, Buffing , Rolling Machine, Glazing machine Course Outcome: CO2 Teaching Hours: 06 hrs. Marks:08 (R- 02, U-02, A-04)
3	3. Object of Tanning reagent, synthetic tanning agent , dyes, fat liquor retanning 3.1. Natural tanning reagent-Wattle extract , G.S. powder Myrobalam extract , Chest nut extract , Quebracho , Advantages of retanning agent 3.2. Synthetic tanning agent- Chrome Syntan ,Chrome alum Syntan ,Dispersing Syntan , Replacement Syntan , Pre-tanning Syntan Bleaching Syntan , Neutralizing Syntan ,Dye Leveling Syntan , Advantages of synthetic tanning agent 3.3. Dyes-Acid dye ,Basic dye ,Direct dye , Advantages of dyeing 3.4. Fat liquor- Vegetable based fat liquor , Synthetic based fat liquor ,Semi synthetic fat liquor , Fish oil based fat liquor , Advantage of fat liquoring 3.5. Fixing Course Outcome: CO3 Teaching Hours : 10 hrs Marks:12 (R- 04, U-06, A-02)
4	4. Properties of the wet end leather (crust) leather 4.1. Crusting – white crust , Dyed Crust 4.2. Properties for Chrome retanned Upper leather 4.3. Properties of leather for Semi Chrome Upper leather 4.4. properties for Garment leather 4.5. Properties for leather for Small Leather Goods 4.6. Properties for leather for Medium Leather Goods 4.7. Properties for leather for Heavy leather Goods 4.8. Properties for Suede leather 4.9. Properties for Nubuck leather Course Outcome: CO4 Teaching Hours:08 hrs Marks: 12 (R- 04, U-06, A-02)
5	5. Object of Process in the post tanning operation 5.1. Selection of Tanned leather for making white / dyed crust according to properties require for finished leather 5.2. Semi chroming 5.3. Chrome alum tanning 5.4. Re-chroming 5.5. Sammying 5.6. Shaving 5.7. Shaved weight 5.8. Washing before neutralization 5.9. Neutralization 5.10. Washing after neutralization

	5.11. Retanning 5.12. Dyeing 5.13. Fat liquoring 5.14. Fixing 5.15. Piling 5.16. Slikering 5.17. White crust 5.18. Dyed crust Course Outcome: CO5 Teaching Hours: 10 hrs Marks:12 (R- 02, U-04, A06)
6	6. Post crusting operation 6.1. Setting 6.2. Drying 6.3. Conditioning 6.4. Staking 6.5. Toggling 6.6. Trimming 6.7. Buffing 6.8. Snuffing 6.9. Selection of Grit Paper for making suede leather /Nubuck leather Course Outcome: CO6 Teaching Hours :05 hrs. Marks: 08 (R- 02, U-02, A-04)

Suggested Specifications Table (Theory):

Unit No	Topic Title	Distribution of Theory Marks			
		R Level	U Level	A Level	Total Marks
1	Properties And Gradation of Tanned Leather ,	04	04	00	08
2	Mechanical operations post tanning operation	02	02	04	08
3	Object of Tanning reagent, synthetic tanning agent , dyes, fat liquor retanning	04	06	02	12
4	Properties of the wet end leather (crust) leather	04	06	02	12
5	Object of Process in the post tanning operation	02	04	06	12
6	Post crusting operation	02	02	04	08
Total		18	24	18	60

List of the Total Experiment 03 are compulsory

Sr. No.	Unit No	COs	Title of the Experiments	Hours
1	1	CO 1	Preparation for making chrome retanned Goat upper leather	02
2	1	CO 2	Selection of Mechanical operations for post tanning operation	02
3	1	CO 3	Selection of Tanning reagent, synthetic tanning agent , dyes, fat liquor retanning	02
4	1	CO 4	Observation of required properties of the wet end leather (crust) leather	02
5	1	CO 5	Confirmation of the various stages of process in the post tanning operation	16
6	1	CO 6	object of further process after post tanning operation (post crusting operation)	06
7	2	CO 1	Preparation for making chrome retanned Goat Garment Leather	02
8	2	CO 2	Selection of Mechanical operations for post tanning operation	02
9	2	CO 3	Selection of Tanning reagent, synthetic tanning agent , dyes, fat liquor retanning	02
10	2	CO 4	Observation of required properties of the wet end leather (crust) leather	02
11	2	CO 5	Confirmation of the various stages of process in the post tanning operation	16
12	2	CO 6	Pre plan the further process after post tanning operation (post crusting operation)	06
13	3	CO 1	Preparation for making Semi chrome Goat upper leather	02
14	3	CO 2	Selection of Mechanical operations for post tanning operation	02
15	3	CO 3	Selection of Tanning reagent, synthetic tanning agent , dyes, fat liquor retanning	02
16	3	CO 4	Observation of required properties of the wet end leather (crust) leather	02
17	3	CO 5	Confirmation of the various stages of process in the post tanning operation	16
18	3	CO 6	Pre plan the further process after post tanning operation (post crusting operation)	06
			TOTAL	90

References/ Books:

Sr. No.	Title	Author, Publisher, Edition and Year Of publication	ISBN
1	Theory And Practice of Leather Manufacturing	K T Sarkar Published by Author in Chennai. in1995	ISBN 10- 7901244321, 7901024321
2	Leather Technician's Handbook	J H Sharp house Leather Producers' Association (1 February 1972)	ISBN-10: 0950228508 ISBN-13: 978-950228501

E-Reference

1. <https://www.youtube.com/watch?v= NTrjVv5-yI>
2. <https://www.youtube.com/watch?v=Cu6wGtT-lSo>
3. <https://www.youtube.com/watch?v=Fu0Eg0jxst0>
4. https://www.youtube.com/watch?v=lJnypKc2Y_M
5. <https://www.youtube.com/watch?v=XanRQJDgUxc>
6. <https://www.leather-dictionary.com/index.php/Leather>
7. <https://en.wikipedia.org/wiki/Leather>

CO Vs PO and CO Vs PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	2	1	1	3	2	1	1	1	1	1
CO2	1	1	-	-	2	1	1	1	-	-
CO3	2	2	-	1	-	1	1	1	-	-
CO4	1	3	3	3	2	1	1	3	3	3
CO5	1	3	3	3	2	2	1	3	3	3
CO6	1	3	3	3	2	2	1	3	3	3

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