

**DEEN DAYAL UPADHAYAY - KAUSHAL KENDRA
MINUTES AND SYLLABUS**

FOR

B. Voc (FOOTWEAR AND ACCESSORIES DESIGN)

BOARD OF STUDIES HELD ON 28.05.2018



GANDHIGRAM RURAL INSTITUTE – (Deemed to be University)

DEPARTMENT OF HOME SCIENCE

GANDHIGRAM – 624 302

DINDIGUL DISTRICT, TAMILNADU

INDIA

JULY 2018

THE GANDHIGRAM RURAL INSTITUTE – (Deemed to be) UNIVERSITY
DEPARTMENT OF HOME SCIENCE

DDU – KAUSHAL KENDRA
Scheme of Syllabus for B.Voc - Footwear and Accessories Design

	Course Code	Title of the course	Total contact Hours			CFA	ESE	TOTAL
			Credit	Theory	Practical			
I Semester								
General Components	18FADV0101	Communication Skills	3+0	3	-	40	60	100
	18FADV0102	Material Science	3+0	3	-	40	60	100
	18FADV0103	Introduction to Leather and Leather Products	3+0	3	-	40	60	100
	18FADV0104	Basics of Cutting, Closing and Lasting	3+0	3	-	40	60	100
Total			12	12	-	160	240	400
Skill Based Component	18FADV0105	Pre-Training Operations in Cutting and Pre-Closing	0+4	-	8	60	40	100
	18FADV0106	Pre-Training Operations in Closing and Lasting(p)	0+4	-	8	60	40	100
	18FADV0107	Elements and Methodology of Design (p)	0+4	-	8	60	40	100
	18FADV0108	Cutting Techniques for Leather Products(p)	0+3	-	6	60	40	100
	18FADV0109	Internship –I	0+3	-	-	-	-	50
Total			18		30	240	160	450

II Semester								
General Components	18FADV0210	Environmental Science	3+0	3	-	40	60	100
	18FADV0211	Occupational Health and Safety for Footwear and Allied Industries	3+0	3	-	40	60	100
	18FADV0212	Principles of Merchandising and Marketing	3+0	3	-	40	60	100
	18FADV0213	Introduction to Computer Application	3+0	-	6	40	60	100
Total			12	9	6	160	240	400
Skill Based Component	18FADV0214	Sketching and Rendering –I(p)	0+4	-	6	60	40	100
	18FADV0215	Pre-Assembling Operations of Leather Products(p)	0+4	-	8	60	40	100
	18FADV0216	Stitching of Components for Leather Products(p)	0+4	-	8	60	40	100
	18FADV0217	Machines and Maintenance	3+0	3	-	40	60	100
	18FADV0218	Internship-II	0+3	-	-	50	-	50
Total			18	3	22	270	180	450

III Semester								
General Components	18FADV0319	Business Communications	4+0	4	-	40	60	100
	18FADV0320	Foot anatomy and solid Modeling	4+0	4	-	40	60	100
	18FADV0321	Production and Operation Management	4+0	4	-	40	60	100
Total			12	12	-	120	180	300
Skill Based Components	18FADV0322	Footwear Manufacturing-I(p)	0+4	-	8	60	40	100
	18FADV0323	Leather Goods Manufacturing-I(p)	0+4	-	8	60	40	100
	18FADV0324	Leather Garments Manufacturing-I(p)	0+4	-	8	60	40	100
	18FADV0325	Sketching and Rendering –II(p)	0+3	-	6	60	40	100
	18FADV0326	Internship-III	0+3	-	-	-	-	50
	Total			18	-	30	240	160
IV Semester								
General Components	18YOGV0001	Yoga	0+1	1	-	-	-	50
	18FADV0427	Human Resource Management	4+0	4	-	40	60	100
	18FADV0428	Material Testing	4+0	4	-	40	60	100
	18FADV0429	Illustrations of Leather Products(p)	0+3	-	6	60	40	100
Total			12	9	6	140	160	350
Skill Based Components	18FADV0430	Designing and Pattern Making of Footwear – I(p)	0+4	-	8	60	40	100
	18FADV0431	Designing and Pattern Making of Leather Goods–I(p)	0+4	-	8	60	40	100
	18FADV0432	Designing and Pattern Making of Leather Garments –I(p)	0+4	-	8	60	40	100
	18FADV0433	Life Style Accessories Designing (P)	0+3	-	6	60	40	100
	18FADV0434	Internship-IV	0+3	-	3	50	-	50
	Total			18	-	33	230	120

V Semester								
General Components	18FADV05EX	Elective(E1/E2/E3)	0+4	-	8	60	40	100
	18FADV0535	Material Management	4+0	4	-	40	60	100
	18FADV0536	CAD for Leather Goods and Garments(P)	0+4	-	8	60	40	100
Total			12	4	16	160	140	300
Skill based components	18FADV05EY	Elective(E4/E5/E6)	3+0	3	-	40	60	100
	18FADV0537	Footwear Manufacturing-II(p)	0+3	-	6	60	40	100
	18FADV0538	Leather Goods Manufacturing –II(p)	0+3	-	6	60	40	100
	18FADV0539	Leather Goods Manufacturing –II(p)	0+3	-	6	60	40	100
	18FADV0540	Portfolio	0+3	-	6	60	40	100
	18FADV0541	Internship-V	3	-	3	50	-	50
	Total			18	3	27	290	160
VI Semester								
General Components	18FADV0642	Entrepreneurship Development	4+0	4	-	40	60	100
	18FADV0643	Costing of Leather Products	4+0	4	-	40	60	100
	18FADV0644	CAD for Footwear(P)	0+4	-	8	60	40	100
Total			12	8	8	140	160	300
Skill Based components	18FADV0645	Designing and Pattern Making of Footwear-II(p)	0+4	-	8	60	40	100
	18FADV0646	Designing and Pattern Making of Leather Goods–II(p)	0+4	-	8	60	40	100
	18FADV0647	Designing and Pattern Making of Leather Garments –II(p)	0+4	-	6	60	40	100
	18FADV0648	Project (Internship-VI)	0+6	-	12	60	40	100
	Total			18	-	34	290	160

ELECTIVES for 15FADV05EX & 15FADV05EY

18FADV05E1	Products development in Footwear(P)	0+4	-	4	60	40	100
18FADV05E2	Products development in leather/non leather goods(P)	0+4	-	4	60	40	100
18FADV05E3	Products development in leather garment (p)	0+4	-	4	60	40	100
18FADV05E4	Sports Shoe Manufacturing (T)	3+0	3	-	40	60	100
18FADV05E5	Footwear Retailing (T)	3+0	3	-	40	60	100
18FADV05E6	Safety shoes manufacturing (T)	3+0	3	-	40	60	100

GENERAL COMPONENTS

COMMUNICATION SKILL-I

(Course Code: 18FADV0101)

Credits: 3 + 0

(CFA=40+ ESE= 60)

OBJECTIVES:

- To impart basic communication skills to the students
- To provide listening, reading, writing and speaking skills.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in communication – listening and reading, writing and speaking.

UNIT – I

COMMUNICATION SKILLS IN ENGLISH – Introduction, the importance of English Language, English as the First or Second language, Uses of English language.

UNIT – II

LISTENING SKILLS - What is Listening?, Types of Listening, Objectives of listening, Active Listening – an Effective Listening Skill, Note Taking Tips, Barriers for Good Listening, Purpose of Listening, Outlines and Signposting.

UNIT – III

READING SKILLS - Importance of Reading, definition of Reading, Levels of Reading, Requirements of Reading, Types of Reading, Techniques of Reading, and Academic Reading Tips.

UNIT – IV

WRITING SKILLS - What is Writing?, The Sentence, The Phrase, Kinds of Sentences, Parts of Sentence, Parts of Speech, Articles, Types of Sentences, Time Management in sentence making.

Paragraph, construction of Paragraph, Linkage and Cohesion sentence, Academic Essay Writing, Thesis, Procedure for Thesis Approval and Deposit, Summary, Precise Writing, Report Abstracts, Letter Writing, Memo, Cover Letter, Resume writing.

UNIT – V

SPEAKING SKILLS – Definition of speaking, Barriers of Communication, Types of Communication, Know what you want to say.

LECTURE SCHEDULE:

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Introduction, the importance of English Language, English as the First or Second language, Uses of English language.
4 th to 6 th Week	<ul style="list-style-type: none">• What is Listening?, Types of Listening, Objectives of listening, Active Listening – an Effective Listening Skill, Note Taking Tips, Barriers for Good Listening, Purpose of Listening, Outlines and Signposting.
7 th to 10 th Week	<ul style="list-style-type: none">• Importance of Reading, definition of Reading, Levels of Reading, Requirements of Reading,• 8th week : Mid-Semester Examinations• Types of Reading, Techniques of Reading, and Academic Reading Tips.
11 th to 13 th Week	<ul style="list-style-type: none">• What is Writing?, The Sentence, The Phrase, Kinds of Sentences, Parts of Sentence, Parts of Speech, Articles, Types of Sentences, Time Management in sentence making.
14 th to 16 th Week	<ul style="list-style-type: none">• Definition of speaking, Barriers of Communication, Types of Communication, Know what you want to say.

Text Books:

1. Anderson, Kenneth. Joan Maclean and Tony Lynch. Study Speaking: A Course in Spoken English for Academic Purposes. Cambridge: CUP, 2004.
2. Bellare, Nirmala. Reading Strategies, Vols.1 and 2. New Delhi. Oxford University Press, 1998.
3. Bhasker, W. W. S & Prabhu, N. S.: English through Reading, Vols.1&2 Macmillan, 1975.

REFERENCES

1. Bellare, Nirmala. Reading Strategies, Vols.1 and 2. New Delhi. Oxford University Press, 1998.
2. Bhasker, W. W. S & Prabhu, N. S.: English through Reading, Vols.1&2 Macmillan, 1975.

MATERIAL SCIENCE

(Course Code: 18FADV0102)

Credits: 3 + 0

(CFA=40+ ESE= 60)

Objectives:

- To make the students understand about Leather products materials
- To make the students gain knowledge on Leather products materials

Specific Learning Outcome:

After learning this paper the students will gain knowledge in materials which is used for leather products manufacturing .Types of leathers, lining , insole , out sole, mid sole, toe puff, stiffener, shank, grinderies , thread and needle.

UNIT I

Leather: Types of leather-upper, lining and sole leather-finished leather-aniline-semi aniline-patent-suede-split-defects-properties-elasticity-strength-stretch-heat and water resistance-performance evaluation

UNIT II

Insole: Types of insole, requirement of insole, insole materials, properties of insoleSole-Types of soling materials-PVC, PU, TPR, rubber, EVA, TPU, TPE, & nettle rubber, leather sole-properties of soling materials-leather unit sole preparation

UNIT III

Heel: Heel-definition, types of heels-Cuban, Louis wedge and inbuilt heels –heel materials, properties requirement Shank-types of shank, properties, requirement of shank materials

UNIT IV

Reinforcement: Toe puff and stiffeners-types of toe puffs and stiffeners-paint on liquid, impregnated fabrics, print on hot melt resin, & filmic –properties of toe puff & stiffeners –requirements of the toe puff & stiffeners

UNIT V

Accessories: Ornaments - studs –grinderies- metallic- non metallic grinderies- tack -nail & rivets,wires-eyelet, buckles, buttons, fastness materials-characteristics, requirements and properties of grinderies

Adhesives: classification of adhesives - rubber latex-natural rubber solution -neoprene -poly urethane-hot melt adhesives-principle of adhesion

LECTURE SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Types of leather-upper, lining and sole leather-finished leather-aniline-semi aniline-patent-suede-split-defects-properties-elasticity-strength-stretch-heat and water resistance-performance evaluation
4 th to 6 th Week	<ul style="list-style-type: none"> Types of insole, requirement of insole, insole materials, properties of insoleSole-Types of soling materials-PVC, PU, TPR, rubber, EVA, TPU, TPE, & nettle rubber, leather sole-properties of soling materials-leather unit sole preparation
7 th to 10 th Week	<ul style="list-style-type: none"> Heel-definition, types of heels-Cuban, Louis wedge and inbuilt heels –heel materials, 8th week : Mid-Semester Examinations Properties requirement Shank-types of shank, properties, requirement of shank materials
11 th to 13 th Week	<ul style="list-style-type: none"> Toe puff and stiffeners-types of toe puffs and stiffeners-paint on liquid, impregnated fabrics, print on hot melt resin, & filmic –properties of toe puff & stiffeners –requirements of the toe puff & stiffeners
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> Ornaments - studs –grinderies- metallic- non metallic grinderies- tack -nail & rivets, wires-eyelet, buckles, buttons, fastness materials-characteristics, requirements and properties of grinderies Adhesives: classification of adhesives - rubber latex-natural rubber solution -neoprene -poly urethane-hot melt adhesives-principle of adhesion

Text Books:

1. Thornton, J.H., “Text book of Footwear Materials”, The National Trade Press Ltd., London, 1970.
2. Harvey, A.J., “Footwear Materials and Process Technology”, N.Z. Leather & Shoe Research Association, New Zealand, 1982.
3. Comprehensive Footwear Technology By S. N Ganguly

REFERENCES

1. Moulded and bottoming By K.Shooter
2. Leather Processing & Tanning Technology Hand Book by Ajay Kr Gupta NIIR Kamalanagar, New Delhi
3. Technology and employment in Footwear Technology by Gerard Karen

INTRODUCTION TO LEATHER AND LEATHER PRODUCTS

(Course Code: 18FADV0103)

Credits:3 + 0

(CFA=40+ ESE= 60)

Objectives:

- To make the students understand about existing Leather Products (Footwear, Goods and Garments) Manufacturing Technology.
- To enable the students to gain knowledge on various process involved in Leather Products (Footwear, Goods and Garments) Manufacturing Technology.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in Preservations techniques of raw hide and skins, availability of hides and skins , anatomical structure of hides and skins , beam house operations ,pre tanning and post tanning operations of leather processing and making of footwear and leather goods and garments.

UNIT – I

Histological characteristics of Hides and skins-cows, buffs, goat and sheep-chemical constituents of hides and skins-defects in hides and skins-flaying of animals – preservation techniques

UNIT – II

Chemistry and principles of different pre-tanning process like curing - soaking- liming – de liming - bating –pickling –de pickling and degreasing

UNIT – III

Tanning: Objects of tanning-various types of tanning materials-chrome tanning –general practice in the manufacture of wet-blue- processing of wet blue leathers into upper and lining leather

UNIT –IV

History of shoes-shoes and its components-foot wear types and styles, elementary shoes, typical ladies' shoes, men's and children's shoes-common parts of footwear

UNIT – V

Introduction to leather goods and garments-products-classification-types of constructions-process flow for leather goods and garments-machineries, materials used in leather goods and garments

LECTURE SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Histological characteristics of Hides and skins-cows, buffs, goat and sheep-chemical constituents of hides and skins-defects in hides and skins-flaying of animals – preservation techniques

4 th to 6 th Week	<ul style="list-style-type: none"> • Chemistry and principles of different pre-tanning process like curing - soaking- liming – de liming - bating –pickling –de pickling and degreasing
7 th to 10 th Week	<ul style="list-style-type: none"> • Objects of tanning-various types of tanning materials-chrome tanning • 8th week : Mid-Semester Examinations • General practice in the manufacture of wet-blue- processing of wet blue leathers into upper and lining leather
11 th to 13 th Week	<ul style="list-style-type: none"> • History of shoes-shoes and its components-foot wear types and styles, elementary shoes, typical ladies' shoes, men's and children's shoes-common parts of footwear
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> • Introduction to leather goods and garments-products-classification-types of constructions-process flow for leather goods and garments-machineries, materials used in leather goods and garments

Text Books:

1. "Manual of Shoe Making" – Clarks Ltd. (London) 1978.
2. S. S. Dutta, Introduction to the principles of leather manufacture, Indian Leather Technologies Association, Calcutta, 1980.
3. K.T. Sarkar, Theory and Practice of Leather Manufacture.
4. Wilhelm, A., "Tips for shoe production" Vol. I, II & III, Huthig Buch Verlag, Heidelberg, 1988

REFERENCES

1. CLRI – publications
2. Swam siddha manual by FDDI
3. National and International leather journals

BASICS OF CUTTING, CLOSING AND LASTING

(Course Code: 18FADV0104)

Credits: 3+ 0

(CFA=40+ ESE= 60)

Objectives:

- To provide opportunity for skill development in sketching accessories.
- To impart knowledge on fashion accessories and creativity.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in clicking and stitching of footwear, leather goods and garments components. Different types of lasting and constructions techniques in footwear, finishing techniques of footwear.

UNIT- I

Clicking –definition, role of clicking room, qualities required for good clicking operator. Drawing of hide/skin with their parts- Identification of stretch and tension-characteristics and variations in leather-manufacturing requirements of upper, lining and insoles - cutting directions of upper and lining components.

UNIT-II

Sewing definition, tools used in closing room. Types of sewing machines (flat bed, post bed, cylinder bed)-parts and functions of sewing machines. Seam-definition, types of seam finishes, top seams, decorative stitching. Types of stitches-lock stitch, chain stitch, blind stitch etc-stitch formations.

UNIT- III

Types of threads-natural thread-synthetic thread-their properties-thread size and its application
Needle and its parts-its function-size of needle-suitability of needle and needle point for various types of materials

UNIT-IV

Lasting - principles and methods of lasting for different methods of constructions. Pre lasting-pre-forming-insole attaching- back part moulding - moisture conditioning-gauge marking-bottom roughing and scouring

UNIT-V

Shoe room finishing-heel pairing-heel scour (rough and fine)-edge pairing -heel sour (superfine)-stain heels-smooth heels-gum heels-ink edges-edge set-bottom polish-naumkeag-heel burnish and seat wheel- clean upper and welt - slip last

LECTURE SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Clicking –definition, role of clicking room, qualities required for good clicking operator. • Drawing of hide/skin with their parts- Identification of stretch and tension-characteristics and variations in leather-manufacturing requirements of upper, lining and insoles - cutting directions of upper and lining components.
4 th to 6 th Week	<ul style="list-style-type: none"> • Sewing definition, tools used in closing room. • Types of sewing machines (flat bed, post bed, cylinder bed)-parts and functions of sewing machines. Seam-definition, types of seam finishes, top seams, decorative stitching. • Types of stitches-lock stitch, chain stitch, blind stitch etc-stitch formations.
7 th to 10 th Week	<ul style="list-style-type: none"> • Types of threads-natural thread-synthetic thread-their properties-thread size and its application • 8th week : Mid-Semester Examinations • Needle and its parts-its function-size of needle-suitability of needle and needle point for various types of materials
11 th to 13 th Week	<ul style="list-style-type: none"> • Lasting - principles and methods of lasting for different methods of constructions. Pre lasting-pre- forming-insole attaching- back part moulding - moisture conditioning-gauge marking-bottom roughing and scouring
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> • Shoe room finishing-heel pairing-heel scour (rough and fine)-edge pairing -heel sour (superfine)-stain heels-smooth heels-gum heels-ink edges-edge set-bottom polish-naumkeag-heel burnish and seat wheel-clean upper and welt - slip last

Text Books:

1. “Manual of Shoe Making” – Clarks Ltd. (London) 1978. 5. Wilhelm, A., “Tips for shoe production” Vol. I, II & III, Huthig Buch Verlag, Heidelberg, 1988.
2. S. S. Dutta, Introduction to the principles of leather manufacture, Indian Leather Technologies Association, Calcutta, 1980.
3. Wilhelm, A., “Tips for shoe production” Vol. I, II & III, Huthig Buch Verlag, Heidelberg, 1988

REFERENCES

- 1.Swam siddha manual by FDDI
- 2.Manuals from CLRI Publications
- 3.National and International leather journals

SKILL BASED COMPONENT
PRE-TRAINING OPERATION IN CUTTING AND PRE-CLOSING

(Course Code: 18FADV0105)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about Pre training Operation in Cutting and Pre Closing.
- To enable the students to gain knowledge on Pre training Operation in Cutting and Pre Closing

Specific Learning Outcome:

After learning this paper the students will gain knowledge in how to cut the upper, lining and bottom stock materials effectively. Safety precautions in cutting and pre closing room, Operating of cutting machine, skiving machine, fusing machine and seam pressing machines. Seam preparations, folding and attaching of components.

Cutting:

UNIT- I

Introduction, materials, machines, safety precautions
Tools, classifications and drawing of tools, cutting knives preparation
Paper cutting exercise, synthetic cutting exercise

UNIT- II

Drawing of hides, sides and skins
Identification of defects on various leathers
Cutting of bottom stock components

UNIT- III

Handling and practicing of splitting machine, skiving machine
Handling and practicing of skiving machine

UNIT- IV

Handling and practicing of stamping machine, embossing machine, fusing machine,

UNIT- V

Handling and practicing of seam press machine and various seam preparations, edge treatment practice, attaching and folding practice

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Introduction, materials, machines, safety precautions• Tools, classifications and drawing of tools, cutting knives preparation

	<ul style="list-style-type: none"> • Paper cutting exercise, synthetic cutting exercise
4 th to 6 th Week	<ul style="list-style-type: none"> • Drawing of hides, sides and skins • Identification of defects on various leathers • Cutting of bottom stock components
7 th to 10 th Week	<ul style="list-style-type: none"> • Handling and practicing of splitting machine, skiving machine • 8th week : Mid-Semester Examinations • Handling and practicing of skiving machine
11 th to 13 th Week	<ul style="list-style-type: none"> • Handling and practicing of stamping machine, embossing machine, fusing machine,
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • Handling and practicing of seam press machine and various seam preparations, edge treatment practice, attaching and folding practice

Text Books:

1. Thornton, J.H., "Text book of Footwear Manufacture", The National Trade Press Ltd., London, 1970.
2. Harvey, A.J., "Footwear Materials and Process Technology", N.Z. Leather & Shoe Research Association, New Zealand, 1982.
3. Comprehensive Footwear Technology By S. N Ganguly

REFERENCES

1. Manuals from NIMI Publications
2. Manuals from FDDI
3. Manuals from CLRI Publications
4. Manual of Shoe Making Clarks Ltd

PRE-TRAINING OPERATIONS IN CLOSING AND LASTING

(Course Code: 18FADV0106)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about Pre training Operation in Stitching.
- To enable the students to gain knowledge on Pre training Operation in Stitching

Specific Learning Outcome:

After learning this paper the students will gain knowledge in sewing of the cut components and lasting of closed uppers. Needle replacements, threading, bobbin rewinding and fixing

UNIT- I

Threading
Needle fixing and replacing
Bobbin fixing and replacing and winding
Stitching practice with stitching card (Paper exercise :1to 10)

UNIT- II

Stitching practice with synthetic materials
Stitching practice with leather materials
Safety precautions in closing room

UNIT- III

Bare last tacking
Insole attaching
Vamp lasting (leather vamp)

UNIT- IV

Vamp lasting (leather vamp and lining)
Vamp lasting (leather vamp, lining and stiffener)

UNIT- V

Toe lasting
Seat lasting
Side lasting
Safety precautions in lasting room

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Threading• Needle fixing and replacing• Bobbin fixing and replacing and winding• Stitching practice with stitching card (Paper exercise :1to 10)
4 th to 6 th Week	<ul style="list-style-type: none">• Stitching practice with synthetic materials

	<ul style="list-style-type: none"> • Stitching practice with leather materials • Safety precautions in closing room
7 th to 10 th Week	<ul style="list-style-type: none"> • Bare last tacking • Insole attaching • 8th week : Mid-Semester Examinations • Vamp lasting (leather vamp)
11 th to 13 th Week	<ul style="list-style-type: none"> • Vamp lasting (leather vamp and lining) • Vamp lasting (leather vamp, lining and stiffener)
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • Toe lasting • Seat lasting • Side lasting • Safety precautions in lasting room

Text Books:

1. Thornton, J.H., "Text book of Footwear Manufacture", The National Trade Press Ltd., London, 1970.
2. Harvey, A.J., "Footwear Materials and Process Technology", N.Z. Leather & Shoe Research Association, New Zealand, 1982.
3. Comprehensive Footwear Technology By S. N Ganguly

REFERENCES

1. Manuals from NIMI Publications
2. Manuals from FDDI
3. Manuals from CLRI Publications
4. Manual of Shoe Making Clarks Ltd

ELEMENTS AND METHODOLOGY OF DESIGNS

(Course Code: 18FADV0107)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about elements and methodology of designs.
- To enable the students to gain knowledge designing representation of design in various product

Specific Learning Outcome:

After learning this paper the students will gain knowledge in basic design principles, visual effects of colour, design process and elements of design.

UNIT-I:

Create compositions using elements and basic design principles

Elements of designs- Line, Shape, Point and Form

Basic principles of design and visual aesthetics- Balance, Rhythm, Contrast and Harmony

UNIT-II

Developing compositions

Developing compositions using design elements- Centered, Spaced, Shattered and Framed

Depicting moods through basic elements of design- Masculine and Feminine

UNIT-III

Identify color as an element of design

Dimensions of color- Value/tone, Hue and Chroma/intensity/clarity

Mixing colors to create new combinations or schemes – Primary, Secondary and Tertiary

Shade scale preparation according to color mixing principles

Relationship of color theory to design process identification

UNIT-IV

Identify visual effects of color

Visual or optical effects of color – Size, Density, Value, Visual mixing, Simultaneous contrast, Motion, Texture, creating and presenting Fashion pictures that reflect different visual effects

UNIT-V

Perform design process

Concept of design process – Information collection, Analysis, Synthesis and conceptualization

Identifying and analyzing Structure of the products

Influence of material for effective design process

Commercial considerations in producing a design

PRACTICAL SCHEDULE

No. of week (4hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Elements of designs- Line, Shape, Point and Form • Basic principles of design and visual aesthetics- Balance, Rhythm, Contrast and Harmony • Developing compositions using design elements- Centered, Spaced, Shattered and Framed • Depicting moods through basic elements of design- Masculine and Feminine
4 th to 6 th Week	<ul style="list-style-type: none"> • Dimensions of color- Value/tone, Hue and Chroma/intensity/clarity • Mixing colors to create new combinations or schemes – Primary, Secondary and Tertiary • Shade scale preparation according to color mixing principles • Relationship of color theory to design process identification
7 th to 10 th Week	<ul style="list-style-type: none"> • Visual or optical effects of color – Size, Density, Value, Visual mixing, Simultaneous contrast, Motion, Texture, creating and presenting Fashion pictures that reflect different visual effects • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Concept of design process – Information collection, Analysis, Synthesis and conceptualization • Identifying and analyzing Structure and context building
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • Influence of material for effective design process • Commercial considerations in producing a design

Text Books:

1. Accessories options : Shrugs scarves stoles
2. Bead Fantasies 2 – More beautiful easy to make 19 Jeweller Takako Sanejima
3. Conde Nast fashion book-vol-I & Vol-II

REFERENCES

1. “Quick style”, by- Christine Kunzerlman.
2. 1000s by fashion designers Carolina Cerime
3. 150 Beaded & motifs Kenneth D King

CUTTING TECHNIQUES FOR LEATHER PRODUCTS

(Course Code: 18FADV0108)

Credits: 0 + 3

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to learn the Cutting of Footwear materials
- To make the students understand the cutting process of various foot wear components.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in nesting of hides and skins. Cutting method of upper components, lining components, insoles and non leather materials. Quality control of cut components.

UNIT -I

Review of general qualities of leather
Lay out preparations in hide/skin
Lay out preparation in side

UNIT -II

Calculation of cutting allowance by russ and small method
Cutting techniques of upper components

UNIT -III

Cutting techniques of lining components
Cutting techniques of insoles
Cutting system/techniques of synthetic materials

UNIT -IV

Strap cutting/strap preparation
Splitting of components

UNIT -V

Cutting techniques of reinforcement materials
Quality control inspection for cut components

PRACTICAL SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Review of general qualities of leather• Lay out preparations in hide/skin• Lay out preparation in side
4 th to 6 th Week	<ul style="list-style-type: none">• Calculation of cutting allowance by russ and small method• Cutting techniques of upper components

7 th to 10 th Week	<ul style="list-style-type: none"> • Cutting techniques of lining components • Cutting techniques of insoles • 8th week : Mid-Semester Examinations • Cutting system/techniques of synthetic materials
11 th to 13 th Week	<ul style="list-style-type: none"> • Strap cutting/strap preparation • Splitting of components
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> • Cutting techniques of reinforcement materials • Quality control inspection for cut components

Text Books:

1. Wilhelm, A., "Tips for shoe production" Vol. I, II & III, Huthig Buch Verlag, Heidelberg, 1988.
2. Manual of Shoe Making – Clarks Ltd.
3. Text book of footwear manufacture by j.h Thornton.

REFERENCES

1. Swam Siddha Manual by FDDI.
2. Manuals from NIMI Publications
3. Manuals from SATRA publicatiobs

INTERNSHIP-I

(Course code: 18FADV0109)

Credits: 0+3

(CFA=50)

Specific Learning Outcome:

After successful completion of internship programme students will gain knowledge in manufacturing methodology of different types of footwear, how to solve the upcoming problems and how to increase the productivity.

Field Visit:

From a practical point of view, this approach also seems like it might be a very useful way to document the process of getting to grips with the literature on a subject – helping immensely when it comes to putting together. We have one week/ two week exposure visit at the beginning of first semester. During second semester, the students undertake needs assessment exercise at various textile/ fashion field sites. Documentation in the form of report should be submitted by the candidates for evaluation purpose. The field training component is spread over in all academic institutes to place the successful candidates.

SEMESTER – II
GENERAL COMPONENTS
ENVIRONMENTAL SCIENCE
(Course Code: 18FADV0210)

Credits: 3 + 0

(CFA=40+ ESE= 60)

Objectives:

- To impart the knowledge on environmental and natural resources.
- To study about the impact of pollution, social issues and disaster management.
- To obtain the brief knowledge on Eco system and its functions.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in solid waste managements, waste water managements, air pollution managements, disaster managements and prevention of earth from the hazardous materials.

Unit – I

Introduction-environmental ethics-assessment of socio-economic impact –environment audit-mitigation of adverse impact on environment-importance of pollution control-types of industries and industrial pollution.

Unit – II

Solid waste management-characteristics of industrial waste-methods of collection, transfer and disposal of solid wastes-converting waste to energy-hazardous waste management treatment technologies

Unit – III

Waste water management-characteristics of industrial effluents-treatment and disposal methods-pollution of water sources and effects on human health

Unit – IV

Air pollution management-sources and effects –dispersion of air pollutants-air pollution control methods-air quality management,Noise pollution management –effects of noise on people, noise control methods

Unit – V

Disaster management-meaning, concepts, causes and types, effects of disaster on community economy and environment, disaster management cycle, response rehabilitation, reconstruction, role of community in disaster

LECTURE SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Introduction - environmental ethics-assessment of socio - economic impact –environment audit-mitigation of adverse impact on environment –• Importance of pollution control-types of industries and industrial pollution
4 th to 6 th Week	<ul style="list-style-type: none">• Solid waste management-characteristics of industrial waste-methods of collection, transfer and disposal of solid wastes-converting waste to energy-hazardous waste management treatment technologies
7 th to 10 th Week	<ul style="list-style-type: none">• 8th week : Mid-Semester Examinations• Waste water management-characteristics of industrial effluents-treatment and disposal methods-pollution of water sources and effects on human health
11 th to 13 th Week	<ul style="list-style-type: none">• Air pollution management-sources and effects –dispersion of air pollutants-air pollution control methods-air quality management• Noise pollution management –effects of noise on people, noise control methods
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none">• Disaster management-meaning, concepts, causes and types, effects of disaster on community economy and environment, disaster management cycle, response rehabilitation, reconstruction, role of community in disaster

Text Books:

1. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
2. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad 380013, India, Email: mapin@icenet. net (R). 3. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p.
3. Clerk B.S., Marine Pollution, Clanderson Pross Oxford (TB).

REFERENCES

1. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
2. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad 380013, India, Email: mapin@icenet. net (R). 3. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p.
3. Clerk B.S., Marine Pollution, Clanderson Pross Oxford (TB).

OCCUPATIONAL HEALTH AND SAFETY FOR FOOTWEAR AND ALLIED INDUSTRIES
(Course Code: 18FADV0211)

Credits: 3 + 0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students to learn the Safety in footwear & allied industries.
- To make the students understand the safety procedures involved in the footwear & allied industries.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in safety in footwear and allied industries, Industrial accidents, elements of safety programme, handling of personnel protective equipments and environmental pollution by footwear and allied industries.

UNIT – I

Safety in industries; need for development, importance of safety consciousness in Indian Footwear Industries

UNIT – II

Elements of safety programme, effective realization of economic & social benefits. Effective communication, training at various levels of production & operation psychological attitude towards safety programmes.

UNIT – III

Industrial accidents, identification of accident spots; accident prevention, accident proneness, fire prevention and fire protection identifications of vulnerable areas of accidents.

UNIT – IV

Safety performance: Appraisal, effective steps to implement safety procedures; periodic inspection and study of plant layout and maintenance: proper selection and replacement of handling equipments, personal protective equipments.

UNIT – V

Atmospheric pollution; waste & dust; Toxic materials and gases: Environmental pollution by footwear industry.

LECTURE SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Safety in industries; need for development, importance of safety consciousness in Indian Footwear Industries
4 th to 6 th Week	<ul style="list-style-type: none">• Elements of safety programme, effective realization of economic & social benefits.• Effective communication, training at various levels of production & operation psychological attitude towards safety programmes

7 th to 10 th Week	<ul style="list-style-type: none"> • Industrial accidents, identification of accident spots; • 8th week : Mid-Semester Examinations • Accident prevention, accident proneness, fire prevention and fire protection identifications of vulnerable areas of accidents
11 th to 13 th Week	<ul style="list-style-type: none"> • Safety performance: Appraisal, effective steps to implement safety procedures; periodic inspection and study of plant layout and maintenance: proper selection and replacement of handling equipments, personal protective equipments.
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> • Atmospheric pollution; waste & dust; Toxic materials and gases: Environmental pollution by footwear industry.

Text Books:

1. William Handley, Industrial Safety Hard Book, 2nd edition, McGraw Hill Book Company, 1969.
2. H.W.Heinrich, P.E.Dan Peterson and Nester, Road industrial accident prevention, McGraw Hill Book Co. 1980
3. R.P. Blaka industrial safety, 3rd Edn. Prentice Hall inc., new Jersey, 1963.

REFERENCES

1. EN – 344 Standards.

PRINCIPLES OF MERCHANDISING AND MARKETING

(Course Code: 18FADV0212)

Credits: 3 + 0

(CFA=40+ ESE= 60)

Objectives:

- To impart the knowledge on merchandising management, merchandising concept, terminologies.
- To provide the knowledge on marketing management.
- To obtain the brief knowledge on function of merchandiser.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in merchandising, function of merchandiser, time management, fashion merchandising and marketing analysis.

Unit – I

Merchandising – requirements of purchase order – amendment sheet – direct order – CM order – CMT order – vendor and sub contractor .

Unit – II

Functions of merchandiser – types of sample – samples quality and sample order – record maintenance – approval, types of approval – check points for a proper approval – approving sewing operations and various process.

Unit – III

Time management – production scheduling – route card format – accessories follow up – various process follow up – pattern approval – size set approval – procedures – order executions procedure.

Unit – IV

Fashion merchandising vs retail merchandising , job objectives of retail merchandising , promotional merchandising, visual merchandising techniques , outlet vs retail , SWOT analysis for retail – the advantages of retail outlets.

Unit – V

Marketing analysis – advertise and media planning , fashion shows , industry tour – surveys and organizing of exhibitions .

LECTURE SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Merchandising –requirements of purchase order – amendment sheet – direct order – CM order – CMT order –vendor and sub contractor .
4 th to 6 th Week	<ul style="list-style-type: none">• Functions of merchandiser – types of sample – samples quality and sample order – record maintenance – approval, types of approval – check points for a proper approval – approving sewing operations and various process.
7 th to 10 th Week	<ul style="list-style-type: none">• Time management – production scheduling – route card format – accessories follow up – various process follow up – pattern approval – size set approval – procedures – order executions procedure.• 8th week : Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none">• Fashion merchandising vs retail merchandising , job objectives of retail merchandising , promotional merchandising, visual merchandising techniques , outlet vs retail , SWOT analysis for retail – the advantages of retail outlets
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none">• Marketing analysis – advertise and media planning , fashion shows , industry tour – surveys and organizing of exhibitions .

Text Books:

1. M.s Shesadhri apparel marketing and merchandising ms publication Bangalore.
2. Grace E.Kunz merchandising theory, principle and practices Fairchild publication.
3. Tim sackson and david shaco fashion buying & merchandising management.

REFERENCES

1. Philip kotler , marketing management , prentice hall inc 1996..
2. Ruthe e glock and grace i. Kunz, "apparel manufacturing" prentice hall inc 2005.

INTRODUCTION TO COMPUTER APPLICATIONS

(Course Code: 18FADV0213)

Credits:3 + 0

(CFA=40+ ESE= 60)

OBJECTIVES:

- To impart the basic computer knowledge to the students.
- To provide knowledge on computer hardware and software skills.
- To impart MS Office knowledge to the students

Specific Learning Outcome:

After learning this paper the students will gain knowledge in parts and function of computers, input and output devices, MS word 2000, MS excel 2000 and MS power point 2000.

UNIT – I

Computer – Definition, parts and functions of a computer, Generation of computers, Types of computers, Storage devices – Floppy disc, hard disc, optical disc, Computer Terminologies.

UNIT – II

Input and Output device, Key board, pointing devices, mouse, track ball, joy stick, touch screen, dot matrix printer, laser printer, plotter and types of screens. Introduction to Windows – using mouse, icons, files and folders, creating and copying, moving and deleting, renaming and searching.

UNIT – III

MS Word 2000 – Word processing - features, documentation, creating and editing, cursor movement, selecting text, copying text, finding and replacing text, spell checking, page set up, mail merge and table.

UNIT – IV

MS Excel 2000 – Worksheet - advantages, organization of work sheet area, editing, range, formatting worksheet, chart creation, changing type – print options and built-in functions.

UNIT – V

MS Power point 2000 – Power point – features, create view, save and close presentation, changing the appearance of presentation, special effect, adding table, inserting charts using templates and clip art – getting help.

LECTURE SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Computer – Definition, parts and functions of a computer, Generation of computers, Types of computers, Storage devices – Floppy disc, hard disc, optical disc, Computer Terminologies
4 th to 6 th Week	<ul style="list-style-type: none">• Input and Output device, Key board, pointing devices, mouse, track ball, joy stick, touch screen, dot matrix printer, laser printer, plotter and

	<p>types of screens.</p> <ul style="list-style-type: none"> • Introduction to Windows – using mouse, icons, files and folders, creating and copying, moving and deleting, renaming and searching.
7 th to 10 th Week	<ul style="list-style-type: none"> • 8th week : Mid-Semester Examinations • MS Word 2000 – Word processing - features, documentation, creating and editing, cursor movement, selecting text, copying text, finding and replacing text, spell checking, page set up, mail merge and table.
11 th to 13 th Week	<ul style="list-style-type: none"> • MS Excel 2000 – Worksheet - advantages, organization of work sheet area, editing, range, formatting worksheet, chart creation, changing type – print options and built-in functions.
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> • MS Power point 2000 – Power point – features, create view, save and close presentation, changing the appearance of presentation, • Special effect, adding table, inserting charts using templates and clip art – getting help.

Text Books:

1. Microsoft Office – Complete Reference – BPB Publication.
2. Courter, G Marquis (1999). Microsoft Office 2000: Professional Edition. BPB.
3. PC Software – Shree Sai Prakashan, Meerut.

REFERENCES

1. Sanjay Saxsena, “A First Course in Computer”, Vikas Publishing House, 2000.
2. Sanjay saxsena, “MS Office 2000”, Vikas Publishing House, 2000.
3. Linda Tway, Saphiro Pacific Lajolla, “Multimedia in Action”, Academic Press, 1995.

SKILL BASED COMPONENTS
SKETCHING AND RENDERING – I
(Course Code: 18FADV0214)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To gain an understanding of the relationship between lasts and feet for men's, ladies and children's shoes.
- To gain an insight into the relationship between foot anatomy and footwear design.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in last and feet, ladies shoe design and presentation skill of ladies footwear, men's shoe design and presentation skill of men's footwear.

UNIT I

Lasts and Feet

- The relationship of joint to instep to ankle and ankle
- Use of tape measures and measuring stick
- The relationship between lasts and feet
- Seams and bars and straps and their effect on comfort and fit
- Foot access and comfort for a range of sandals, shoes and boots
- Heel height and its effect on fit and comfort
- Lasts-essential differences for sandals, shoes and boots
- Toe spring and heel heights
- Last drawing, men's, ladies and children's

UNIT II

Ladies Shoe Design

- Lasts and their effect on styling
- Heels and components and their use in styling
- Line proportion and style
- Design treatments: seams, stitching, punching, panels, trims, etc.
- Colour and texture and its effect on styling
- Last drawing/shoe design

UNIT III

Presentation Skills Ladies Footwear

- Design book preparation
- Layout and presentation skills
- Text and technical detailing
- Visual impact/colour
- Factory and technical considerations

UNIT IV

Men's Shoe Design

- Lasts and their effect on styling
- Heels and components and their use in styling
- Line proportion and style
- Design treatments: seams, stitching, punching, panels, trims, etc
- Colour and texture and its effect on styling
- Last drawing/shoe design

UNIT V

Presentation Skills Men's Footwear

- Design book preparation
- Layout and presentation skills
- Text and technical detailing
- Visual impact/ colour
- Factory and technical considerations.

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• The relationship of joint to instep to ankle and ankle• Use of tape measures and measuring stick• The relationship between lasts and feet• Seams and bars and straps and their effect on comfort and fit• Foot access and comfort for a range of sandals, shoes and boots• Heel height and its effect on fit and comfort• Lasts-essential differences for sandals, shoes and boots• Toe spring and heel heights• Last drawing, men's, ladies and children's
4 th to 6 th Week	<ul style="list-style-type: none">• Lasts and their effect on styling• Heels and components and their use in styling• Line proportion and style• Design treatments: seams, stitching, punching, panels, trims, etc.• Colour and texture and its effect on styling• Last drawing/shoe design
7 th to 10 th Week	<ul style="list-style-type: none">• Design book preparation• Layout and presentation skills• Text and technical detailing• 8th week : Mid-Semester Examinations• Visual impact/colour• Factory and technical considerations
11 th to 13 th Week	<ul style="list-style-type: none">• Lasts and their effect on styling• Heels and components and their use in styling

	<ul style="list-style-type: none"> • Line proportion and style • Design treatments: seams, stitching, punching, panels, trims, etc • Colour and texture and its effect on styling • Last drawing/shoe design
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • Design book preparation • Layout and presentation skills • Text and technical detailing • Visual impact/ colour • Factory and technical considerations.

Text Books:

1. Modern Fashion illustration-paco Asensio, ISBN 978-84-968 05-31-6
2. Fashion sketch book-Bina abling
3. Hideaki Chijiwa, Colour harmony – “A Guide to creative colour Combination”.

REFERENCES

1. HelIn Goworek, “Drawing Course a step by step Guide” Blackwell Publications.
2. HW. Janson & Anthony Janson, “History of art” the western radition, revised 6th edition, Upper saddle rivet
3. Roy C. Craven, “Indian Art”, Thames & ‘Hudson.

PRE-ASSEMBLING OPERATIONS FOR LEATHER PRODUCTS

(Course Code: 18FADV0215)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to learn the pre-assembling operations for leather products.
- To make the students understand pre-assembling operations for leather products like foot wear, Leather Goods & Garments.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in making of components for derby, oxford, pantafola, boot, moccasin, ladies court shoe and sandal uppers. Making of components for leather goods and garments.

UNIT -I

- Making of components for derby upper
- Making of components for Oxford upper
- Making of components for slip on/pantafola upper

UNIT -II

- Making of components for boot upper
- Making of components for moccasin upper
- Making of components for court shoe upper

UNIT -III

- Making of components for sandal upper
- Making of components for leather goods – ladies hand bag
- Making of components for leather goods – belt

UNIT -IV

- Making of components for leather goods-purse
- Making of components for leather goods-coin pouch
- Making components for leather goods-clutch purse

UNIT -V

- Making of components for leather garments-jackets
- Making of components for leather garments-skirts
- Making of components for leather garments-trousers

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Making of components for derby upper• Making of components for Oxford upper• Making of components for slip on/pantafola upper

4 th to 6 th Week	<ul style="list-style-type: none"> • Making of components for boot upper • Making of components for moccasin upper • Making of components for court shoe upper
7 th to 10 th Week	<ul style="list-style-type: none"> • Making of components for sandal upper • Making of components for leather goods – ladies hand bag • Making of components for leather goods - belt • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Making of components for leather goods-purse • Making of components for leather goods-coin pouch • Making components for leather goods-clutch purse
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • Making of components for leather garments-jackets • Making of components for leather garments-skirts • Making of components for leather garments-trousers

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Swam siddha Manual by FDDI
2. Manuals from NIMI Publications
3. Manuals from CLRI

STITCHING OF COMPONENTS FOR LEATHER PRODUCTS

(Course Code: 18FADV0216)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to learn the Stitching operations for leather products.
- To make the students understand Stitching operations for leather products like foot wear, Leather Goods & Garments.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in Stitching of components for footwear, Stitching of components for leather goods, Stitching of components for leather garments.

UNIT-I

- Making of derby upper
- Making of oxford upper
- Making of slip on/pantafola upper
- Making of boot upper

UNIT-II

- Making of moccasin upper
- Making of court shoe upper
- Making of sandal upper

UNIT-III

- Making of clutch purse
- Making of belt
- Making of purse

UNIT-IV

- Making of coin pouch
- Making of ladies' bag
- Making of jacket

UNIT-V

- Making of skirt
- Making of trouser

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Making of derby upper• Making of oxford upper• Making of slip on/pantafola upper

	<ul style="list-style-type: none"> • Making of boot upper
4 th to 6 th Week	<ul style="list-style-type: none"> • Making of moccasin upper • Making of court shoe upper • Making of sandal upper
7 th to 10 th Week	<ul style="list-style-type: none"> • Making of clutch purse • Making of belt • 8th week : Mid-Semester Examinations • Making of purse
11 th to 13 th Week	<ul style="list-style-type: none"> • Making of coin pouch • Making of ladies' bag • Making of jacket
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • Making of skirt • Making of trouser

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology

REFERENCES

1. Swyam siddha Manual by FDDI
2. Manuals from NIMI Publications
3. Manualsfrom CLRI

MACHINES AND MAINTENANCE

(Course Code: 18FADV0217)

Credits: 3 + 0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students to understand machines and maintenance of leather products
- To impart basic maintenance of machines

Specific Learning Outcome:

After learning this paper the students will gain knowledge in different types of mechanics in machines, electronic , magnoelectric, photo cell and control safety systems, clicking room,closing room machines, transport systems in footwear industries and machine arrangements in closing room. Metal detector policy in footwear industries.

UNIT – I

General Engineering: Introduction to different mechanics in machines, pneumatic system and hydraulic system, Use of these systems either alone or in combination in the working parts of the machine. Electronic, magnoelectric, photo-cell and control safety systems.

UNIT – II

Machines in clicking Designing room, Machines diagram, function of machines, safety precautions while operating. Tools used in clicking room & Designing room.

Types of sewing machines, diagram of sewing machines. Assembling & Dismantling of sewing machines. Fault & remedy of sewing machine.

UNIT – III:

Skiving machine, splitting machines, Embossing machines, Fusing machines, Hammering machines, Screen printing.

UNIT – IV

Types of conveyor, Trolley, Transportation in closing room, Eye letting machines, punching machines, Gathering machines., TRANSPORT SYSTEM - Different types of material handling system in footwear industry. Manual, semi-automatic and automatic conveyors

UNIT – V

Machine Arrangements in closing room, cycle time, take time, in closing room. Broken Needle policy, Metal Detector in closing room.

LECTURE SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• General Engineering: Introduction to different mechanics in machines, pneumatic system and hydraulic system, Use of these systems either alone or in combination in the working parts of the machine.• Electronic, magnoelectric, photo-cell and control safety systems.

4 th to 6 th Week	<ul style="list-style-type: none"> • Machines in clicking Designing room, Machines diagram, function of machines, safety precautions while operating. Tools used in clicking room & Designing room. • Types of sewing machines, diagram of sewing machines. Assembling & Dismantling of sewing machines. Fault & remedy of sewing machine.
7 th to 10 th Week	<ul style="list-style-type: none"> • Skiving machine, splitting machines, Embossing machines, • 8th week : Mid-Semester Examinations • Fusing machines, Hammering machines, Screen printing.
11 th to 13 th Week	<ul style="list-style-type: none"> • Types of conveyor, Trolley, Transportation in closing room, Eye letting machines, punching machines, Gathering machines., • TRANSPORT SYSTEM - Different types of material handling system in footwear industry. Manual, semi-automatic and automatic conveyors
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> • Machine Arrangements in closing room, cycle time, take time, in closing room. • Broken Needle policy, Metal Detector in closing room.

Text Books:

1. Shigley, J.E. and Vicker, J.J., "Theory of Machines and mechanisms", McGraw Hill,1995.
2. Paul, B., "Kinematics and Dynamics of Planar Machinery", Prentice Hall, 1979.
3. Manual of shoe making – clarks ltd

REFERENCES

1. Swam siddha Manuals from FDDI
2. Manuals from SATRA
3. Internationals footwear journals.

INTERNSHIP –II

(Course code: 18FADV0218)

Credits: 0+3

CFA=50

Specific Learning Outcome:

After successful completion of internship programme students will gain knowledge in manufacturing methodology of different types of footwear, leather goods and garments, how to solve the upcoming problems and how to increase the productivity.

Field Visit:

From a practical point of view, this approach also seems like it might be a very useful way to document the process of getting to grips with the literature on a subject – helping immensely when it comes to putting together. We have one week/ two week exposure visit at the beginning of first semester. During second semester, the students undertake needs assessment exercise at various shoe making/ shoe designing field sites. Documentation in the form of report should be submitted by the candidates for evaluation purpose. The field training component is spread over in all academic institutes to place the successful candidates.

SEMESTER – III

GENERAL COMPONENTS

BUSINESS COMMUNICATION

(Course Code: 18FADV0319)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students to learn the basic Business Communication.
- To impart basic Business Communication to the students.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in types of business communications, business letter, drafting of business letter and oral communications.

UNIT - I

Introduction to communication:

Meaning and definition-process-functions-objectives-importance-essentials of good communication-communication barriers-overcoming communication barriers

UNIT - II

Types of communication:

written-oral- face to face - silence-merits and limitations of each type-developing oral business, communication skills - introduction, advantages of oral communication, oral business presentation

UNIT - III

Business letter:

Need and functions of business letters-planning and lay out of business letters-kinds of business letters-essentials of effective correspondence

UNIT - IV

Drafting of business letter:

Enquiries and replies-placing and fulfilling orders-complaints and follow ups-sales letters-circular letters-application for employment and resume-report writing-notices, agenda and minutes of the meeting – memos

UNIT - V

Oral communication:

Meaning, nature and scope-principles of effective oral communications-techniques of effective speech-media of oral communication (face to face conversation- teleconferences-press conference-demonstration-radio recording-meeting-oral report) - The art of listening-principles of good listening

LECTURE SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Meaning and definition-process-functions-objectives-importance-essentials of good communication-communication barriers-overcoming communication barriers
4 th to 6 th Week	<ul style="list-style-type: none"> • written-oral- face to face - silence-merits and limitations of each type-developing oral business, communication skills – • introduction, advantages of oral communication, oral business presentation
7 th to 10 th Week	<ul style="list-style-type: none"> ○ • Need and functions of business letters-planning and lay out of business letters-kinds of business letters- • 8th week : Mid-Semester Examinations • essentials of effective correspondence
11 th to 13 th Week	<ul style="list-style-type: none"> • Enquiries and replies-placing and fulfilling orders-complaints and follow ups-sales letters-circular letters- • application for employment and resume-report writing-notices, agenda and minutes of the meeting – memos
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • Meaning, nature and scope-principles of effective oral communications-techniques of effective speech-media of oral communication (face to face conversation- teleconferences-press conference-demonstration-radio recording-meeting-oral report) – • The art of listening-principles of good listening

Text Books:

1. M.K. Sehgal & V. Khetrapal - Business Communication (Excel books)
2. Tayler Shinley – Communication for Business (Pearson Education, 4th Edition)
3. R.C. Sharma, Mohan Krishna – Business : Correspondence and Report Writing (Tata McGraw Hill, 3rd Edition)

REFERENCE

1. R.C. Sharma, Mohan Krishna – Business : Correspondence and Report Writing (Tata McGraw Hill, 3rd Edition)
2. M.K. Sehgal & V. Khetrapal - Business Communication (Excel books)
3. Tayler Shinley – Communication for Business (Pearson Education, 4th Edition)

FOOT ANATOMY AND SOLID MODELLING

(Course Code: 18FADV0320)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To provide comprehensive knowledge anatomy of human foot and its functions.
- To understand basic comfort and protection of footwear.
- To impart in-depth knowledge of solid modeling and development of foot wear.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in foot skeleton , long bones and short bones, muscles in foot, foot joints, arches of the foot, foot deformities and shoe sizing systems.

UNIT - I

Anatomy of human foot:

Bony structure of leg and foot-joints, ankles, metatarsals, phalanges, their function in structural stability (static and dynamic), muscles help in walking, muscle relate to limb function like flexion, extension, diagram of foot-functions of foot

UNIT - II

Growth and deformities:

Growth of foot from infant to maturity, arches of foot, relationship between foot shape and last. Different types of foot deformities like pescavus, valgus, blisters, injuries in sports, methods of prevention -foot care and protection

UNIT - III

Bio mechanics:

Free body diagram, analysis-bio mechanics of walking. Types of forces-friction, movements. Gait analysis and foot comfort-gait patterns, pressure distribution in normal and abnormal feet

UNIT - IV

Sizing systems:

Foot sizing systems - English, French, American, German, Japan, Mondo-point and their conversion and comparison.

UNIT - V

Solid modeling:

Lasts-foot and lasts-last manufacture, materials for last making, different measurement of foot and last, Types of lasts-hinge last-telescopic last-solid block last,-scoop block last-thong last-their uses

LECTURE SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">Bony structure of leg and foot-joints, ankles, metatarsals, phalanges, their function in structural stability (static and dynamic),muscles help in walking, muscle relate to limb function like flexion, extension, diagram of foot-functions of foot
4 th to 6 th Week	<ul style="list-style-type: none">Growth of foot from infant to maturity, arches of foot, relationship between foot shape and last.Different types of foot deformities like pescavus, valgus, blisters, injuries in sports, methods of prevention -foot care and protection
7 th to 10 th Week	<ul style="list-style-type: none">Free body diagram, analysis-bio mechanics of walking.Types of forces-friction, movements.8th week : Mid-Semester ExaminationsGait analysis and foot comfort-gait patterns, pressure distribution in normal and abnormal feet
11 th to 13 th Week	<ul style="list-style-type: none">Foot sizing systems - English, French, American, German, Japan,Mondo-point and their conversion and comparison.
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none">Lasts-foot and lasts-last manufacture, materials for last making, different measurement of foot and last,Types of lasts-hinge last-telescopic last-solid block last,-scoop block last-thong last-their uses

Text Books:

- Hollinshead, H., "Text book of Anatomy", Oxford IBH London 1967.
- Morton, D.J., "The Human Foot", Hafner Publishing Co., New York, London, 1964.
- Thornton, J.H., "Text book of Footwear Manufacture", National Trade Press Ltd., London, 1970

REFERENCES

- Edwards, C.A., "Orthopaedic shoe technology", Precision Printing Co., Indiana, 1964.
- Whittle, M., "Gait Analysis: An introduction," butterworth – Heinemann Publication, 2002.
- Vincent G Duffy, "Digital Human Modelling", Springer, July 2011.

PRODUCTION AND OPERATIONS MANAGEMENT
(Course Code: 18FADV0321)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students to learn the Production Operations Management
- To make the students understand the steps involved in production operation Management.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in production planning and control, quality management, total quality management, production improvements techniques and maintenance policies.

UNIT - I

Production planning and control:

Production planning techniques for various process choices, techniques of production control, aggregate planning techniques

UNIT - II

Quality management:

Introduction, meaning, quality, characteristics of goods and services, tools and techniques for quality improvement - check sheet, histogram, scatter diagram, cause and effect diagram, pareto chart, process diagram.

UNIT - III

Total quality management:

Total quality management -model-service quality, concept of six sigma and its applications-quality assurance

UNIT - IV

Production improvement techniques:

Work study-method study-work measurement-time study-stop watch time study-work sampling

UNIT - V

Maintenance:

Maintenance policies for facilities and equipments-time of failure-preventive versus break down maintenance-procedure for maintenance, total productive maintenance (TPM)

LECTURE SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Production planning techniques for various process choices, techniques of production control, • aggregate planning techniques
4 th to 6 th Week	<ul style="list-style-type: none"> • Introduction, meaning, quality, characteristics of goods and services, tools and techniques for quality improvement – • check sheet, histogram, scatter diagram, cause and effect diagram, pareto chart, process diagram.
7 th to 10 th Week	<ul style="list-style-type: none"> • 8th week : Mid-Semester Examinations • Total quality management -model-service quality, • concept of six sigma and its applications-quality assurance
11 th to 13 th Week	<ul style="list-style-type: none"> • Work study-method study-work measurement-time study- • stop watch time study-work sampling
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • Maintenance policies for facilities and equipments-time of failure-preventive versus break down maintenance- • procedure for maintenance, total productive maintenance (TPM)

Text Books:

1. Adam Jr Everetl E. R J – Production and Operations Management (Prentice-Hall, 1992), 2000 5th ed.
2. Chary- Production and Operations Management (Tata McGraw-Hill, 1997 9th ed.)
3. Hill T- Operations Management (Palgrave, 2000)
4. Johnston R et al – Cases in Operations Management (Pitman, 1993)
5. McGregor D – Operations Management (McGraw-Hill, 1960) Morton- Production and Operations Management (Vikas)

REFERENCES

1. Haleem A- Production and Operations Management (Galgotia books, 2004)
2. Shanker Ravi- Industrial Engineering (Galgotia)
3. Chase & Production and operation Management, Richard Irwin London; 1995, 7th ed.
4. Production & Operations Management.- Kanishka Bedi, (Oxford University Press)

**SKILL BASED COMPONENTS
FOOTWEAR MANUFACTURING – I**

(Course Code:18FADV0322)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to learn the Footwear Manufacturing
- To make the students understand the process involved in footwear making

Specific Learning Outcome:

After learning this paper the students will gain knowledge in making of derby, oxford, moccasin, pantafola and ladies court shoe with cemented constructions.

UNIT-I

- Making of Derby shoe with cemented construction
- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control inspections.

UNIT-II

- Making of Oxford shoe with cemented construction
- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control inspections.

UNIT-III

- Making of Moccasin shoe with cemented construction
- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control inspections.

UNIT-IV

- Making of Slipon/pantafola shoe with cemented construction
- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control inspections.

UNIT-V

- Making of Court shoe with cemented construction
- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control inspections.

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Making of Derby shoe with cemented construction <ul style="list-style-type: none">• Select the design• Select the materials• Cut the components• Pre close the components• Close the components• Lasting the closed uppers• Perform the finishing operations.• Quality control inspections.
4 th to 6 th Week	Making of Oxford shoe with cemented construction <ul style="list-style-type: none">• Select the design• Select the materials• Cut the components• Pre close the components• Close the components• Lasting the closed uppers• Perform the finishing operations.• Quality control inspections.
7 th to 10 th Week	<ul style="list-style-type: none">• 8th week : Mid-Semester Examinations Making of Moccasin shoe with cemented construction <ul style="list-style-type: none">• Select the design

	<ul style="list-style-type: none"> • Select the materials • Cut the components • Pre close the components • Close the components • Lasting the closed uppers • Perform the finishing operations. • Quality control inspections.
11 th to 13 th Week	<p>Making of Slipon/pantafola shoe with cemented construction</p> <ul style="list-style-type: none"> • Select the design • Select the materials • Cut the components • Pre close the components • Close the components • Lasting the closed uppers • Perform the finishing operations. • Quality control inspections.
14 th to 15 th Week Total :60hours	<p>Making of Court shoe with cemented construction</p> <ul style="list-style-type: none"> • Select the design • Select the materials • Cut the components • Pre close the components • Close the components • Lasting the closed uppers • Perform the finishing operations. • Quality control inspections.

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology .by S.N.Ganguly

REFERENCES

1. Manuals from NIMI Publications
2. Manuals from FDDI
3. Manuals from CLRI
4. Manuals of Shoe Making Clarks Ltd

LEATHER GOODS MANUFACTURING –I

(Course Code: 18FADV0323)

Credits:0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to learn the Leather Goods Manufacturing
- To make the students understand the process involved in leather goods making

Specific Learning Outcome:

After learning this paper the students will gain knowledge in manufacturing of coin pouch,wallet, clutch purse, card case

UNIT-I

- Making of coin pouch
- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the coin pouch.

UNIT-II

- Making of wallet
- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the wallet.

UNIT-III

- Making of clutch purse
- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the clutch purse.

UNIT-IV

- Making of card case
- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the card case.

UNIT-V

- Making of cell phone pouch
- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the cell phone pouch.

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Making of coin pouch <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the coin pouch.
4 th to 6 th Week	Making of wallet <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the wallet.
7 th to 10 th Week	<ul style="list-style-type: none"> • 8th week : Mid-Semester Examinations Making of clutch purse <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components

	<ul style="list-style-type: none"> • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the clutch purse.
11 th to 13 th Week	<p>Making of card case</p> <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the card case.
14 th to 15 th Week Total :60hours	<p>Making of cell phone pouch</p> <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the cell phone pouch. • Quality control inspection of leather goods

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology

REFERENCES

1. Manuals from NIMI Publications
2. Manuals from FDDI
3. Manuals from CLRI

LEATHER GARMENTS MANUFACTURING –I

(Course Code: 18FADV0324)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to learn the leather garments manufacturing
- To make the students understand the steps involved in components of leather garments

Specific Learning Outcome:

After learning this paper the students will gain knowledge in making of leather sleeve, leather placket, leather packet, leather collar, leather yoke and components of leather garments.

UNIT-I

Developing of basic pattern (Miniature)

Measurement preparation for measuring, bodice measurement, sleeve measurement, skirt measurement, trouser measurement

- Basic bodice pattern-Back
- Basic Bodice pattern –Front
- Basic sleeve pattern
- Basic skirt pattern
- Basic trouser pattern

UNIT-II

Developing of pattern for sleeve (Miniature)

Sleeve, types of sleeve, plain sleeve, long sleeve, bishop sleeve, puff sleeve, raglan, kimono, dolman sleeve

UNIT-III

Developing collar

Collar –Designing collar, classification- cape collar, puritan collar, sailor collar, full roll convertible collar, partial roll, collar, Chinese collar, shawl collar, tailored collar

UNIT-IV

Developing Yoke & Pocket

Yoke partial yoke, yoke releasing fullness, yoke in the upper part of a dress

Pocket Types patch pocket, set in pocket pocket set in a seam.

UNIT-V

Placket –lapped seam placket, zipper plackets button –button types, button hole, button loops, shank

button, snaps or press button

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Making of leather jacket <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the jacket.
4 th to 6 th Week	Making of leather plain skirt <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the plain skirt
7 th to 10 th Week	<ul style="list-style-type: none"> • 8th week : Mid-Semester Examinations Making of leather waist coat <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the waist coat.
11 th to 13 th Week	Making of leather pleated skirt <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the pleated skirt.
14 th to 15 th Week Total :60hours	Making of leather circular skirt <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the circular skirt. • Quality control inspection of leather garments

Text Books:

1. Wilhelm, A., "Tips for shoe production" Vol. I, II & III, Huthig Buch Verlag, Heidelberg, 1988
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology

REFERENCES

1. Manuals from NIMI Publications
2. Manuals from FDDI
3. Manuals from CLRI

GRU-DTBU

SKETCHING AND RENDERING - II
(Course Code: 18FADV0325)

Credits: 0 + 3

(CFA=60+ ESE= 40)

Objectives:

- To provide opportunity for skill development to render the products
- To impart knowledge on fashion accessories and creativity.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in basic design and styles, rendering techniques, templates to draw sketches, drawing of footwear, drawing of men's accessories and drawing of different bags.

UNIT- I

Drawing Accessories on different surfaces

2 Dimensional drawing of accessories – drawing using dimensions and measurements

3 Dimensional drawing of accessories – drawing different perspectives

UNIT- II

Identify basic design styles

Rendering Techniques - Pencil, Steadler and Color Pencil, Charcoal. Fabric Rendering 10

Samples of Different Varieties of Fabric.

UNIT-III

Rendering techniques-spraying,brushing,use template to draw sketches perform rendering, obtaining and observing drawing for rendering operation (30 varieties of rendering using these elements)

UNIT- IV

Rendering mediums –water colour, poster colour use template to draw sketches, perform rendering, obtain and observing drawing for rendering (30 varieties of samples use these elements)

UNIT-V

Rendering medium- oil colour, acrylic colour use templates to draw sketches,perform rendering, obtaining & observing drawing for rendering (30 varieties of samples using these elements)

UNIT-V

Drawing bags

Travel bags, Ladies hand bags

PRACTICAL SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Identify basic design styles• Rendering Techniques - Pencil, Steadler and Color Pencil, Charcoal. Fabric Rendering 10 Samples of Different Varieties of Fabric.• Drawing Accessories on different surfaces• Dimensional drawing of accessories – drawing using dimensions and measurements

	<ul style="list-style-type: none"> • Dimensional drawing of accessories – drawing different perspectives
4 th to 6 th Week	<ul style="list-style-type: none"> • Use template to draw sketches • Perform rendering • Obtaining and observing drawing for rendering operation • Identification and selection of appropriate rendering techniques- Spraying, Brushing • Rendering mediums- Water color, Pencil color and Oil color • Creating components using rendering techniques and mediums – Texture, Volume, Light and shade effects • Draw and render materials and accessories – fittings & fasteners
7 th to 10 th Week	<ul style="list-style-type: none"> • Drawing of Footwear • Mens – Casual Shoes, formal shoes, flipflops, sandals, sports shoes, boots. • 8th week : Mid-Semester Examinations • Womens – Boots, Floaters, gladiators, mojaris, heels, wedges, sandals, bellies, flipflops • Children – Shoes, flipflops, sandals
11 th to 13 th Week	<ul style="list-style-type: none"> • Drawing men's accessories: • Wallets, Belts, suspenders, socks, card holders, key chains, hats & caps, head wraps, necktie, cufflinks, cravats, handkerchiefs, pocket squares, muffler, umbrella, stoles and scarves. • Drawing women's accessories: • Wallets, Belts, socks & stockings, suspenders, neckties, hair accessories, mufflers, hats & caps, head wraps, cufflinks, umbrellas, cravats, handkerchiefs, stoles & scarves
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> • Drawing bags • Travel bags, Ladies hand bags

Text Books:

1. Quick style", by- Christine Kunzerlman.
2. 1000 Ideas by fashion designers Carolina Cerime
3. 150 Beaded & motifs Kenneth D King

REFERENCES

1. 21st Century Jewellery Mrthe Le Van
2. Accessories options : Shrugs scaxues stoles
3. Bead Fantasies 2 – More beautiful easy to make jeweler Takako Sanejima

INTERNSHIP –III

(Course code: 18FADV0326)

Credits: 0+3

(CFA=50)

Specific Learning Outcome:

After successful completion of internship programme students will gain knowledge in manufacturing methodology of different types of footwear, leather goods and garments, how to solve the upcoming problems and how to increase the productivity.

Field Visit:

From a practical point of view, this approach also seems like it might be a very useful way to document the process of getting to grips with the literature on a subject – helping immensely when it comes to putting together. We have one week/ two week exposure visit at the beginning of first semester. During second semester, the students undertake needs assessment exercise at various shoe making/ shoe designing field sites. Documentation in the form of report should be submitted by the candidates for evaluation purpose. The field training component is spread over in all academic institutes to place the successful candidates.

SEMESTER – IV

GENERAL COMPONENTS

HUMAN RESOURCE MANAGEMENT

(Course Code: 18FADV0427)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students to learn the human resource management
- To make the students understand the human resource management

Specific Learning Outcome:

After learning this paper the students will gain knowledge in role of human resource managers, training process, establishing pay plans and labour relations.

UNIT – I

Human resource philosophy-changing environments of HRM- strategic Human Resource Management-using HRM to attain competence advantage-trends in HRM-organization of HRM departments-line and staff functions-role of Human Resource Managers

UNIT – II

Employment planning and forecasting, recruitment, selection process-building employee commitment-promotion from within sources-induction

UNIT – III

Orientation and training-orienting the employees, training process, need analysis, training – techniques-developing managers-management development-performance appraisal in practice-managing careers-career planning and development-managing promotions and transfer

UNIT – IV

Establishing pay plans-basics of compensations - factors determining pay rate-current trends in compensation-job evaluation-incentives-benefits-welfare measures to build employee commitment

UNIT – V

Labour relations-employee security-industrial relation-discipline administration-managing dismissals and separation-labour welfare-importance of labour legislations-employee health-auditing-future of HRM function

LECTURE SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Human resource philosophy-changing environments of HRM- strategic Human Resource Management-using HRM to attain competence advantage-• trends in HRM-organization of HRM departments-line and staff functions-role of Human Resource Managers
4 th to 6 th Week	<ul style="list-style-type: none">• Employment planning and forecasting, recruitment,• selection process-building employee commitment-promotion from within sources-induction
7 th to 10 th Week	<ul style="list-style-type: none">• Orientation and training-orienting the employees, training process, need analysis,• 8th week : Mid-Semester Examinations• training –techniques-developing managers-management development-performance appraisal in practice-managing careers-career planning and development-managing promotions and transfer
11 th to 13 th Week	<ul style="list-style-type: none">• Establishing pay plans-basics of compensations –• factors determining pay rate-current trends in compensation-job evaluation-incentives-benefits-welfare measures to build employee commitment
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none">• Labour relations-employee security-industrial relation-discipline administration-managing dismissals and separation-labour welfare-• importance of labour legislations-employee health-auditing-future of HRM function

Text Books:

1. Garry Dessler, “Human Resource Management”, seventh edition, Prentice Hall of India
2. Venkatapathy.R.& Assissi Menacheri,
“Industrial Relation and Labour Welfare”, Adithya Publication, CBE, 2001
3. VSP Roa, Human Resource Management: Text and Cases, I Edition, Excel Books

REFERENCE

- 1.Garry Dessler, “Human Resource Management”, seventh edition, Prentice Hall of India
- 2.Venkatapathy.R.& Assissi Menacheri,
“Industrial Relation and Labour Welfare”, Adithya Publication, CBE, 2001
- 3.VSP Roa, Human Resource Management: Text and Cases, I Edition, Excel Books

YOGA

(Course Code: 18YOGV0001)

Credits: 0 + 1

(CFA=20+ ESE= 30)

OBJECTIVE:

- To learn Yoga for keeping body and mind in good condition.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in objectives and history of yoga. Difference between practice of Asanas and Physical Exercises-Modern Vs. Yogic concept on diet. Gandhian way of Meditation.

UNIT-I: History of Yoga-Definition of the term yoga-Comprehensive Nature and Scope Yoga-Aims and Objectives of Yoga-Variou School of Yoga.

UNIT-II: Pantanjali yoga-Astangayoga-Tantrayoga-Mantrayoga-Halthayoga-Layayoga, Rajayoga-Ganayoga-Bhaktiyoga-Karmayoga.

UNIT-III: Yoga as an ideal system of physical culture-Do's and Don'ts of specific Yogic Techniques-Difference between practice of Asanas and Physical Exercises-Modern Vs. Yogic concept on diet.

UNIT-IV: Preparing Oneself for Yogi practices –Different kinds of Yogic practices-Suryanamaskar-Asanas (Padmasana-Vajrasana-Gomukhasana-Sarvangasana Halasana-Shalabhasana-Dhanurasana-Paschimottanasana-Yogamudra-Utkatasana-Savasana-Makarasana.

UNIT-V: Parnayamas (Anuloma-Viloma Pranayama, Nadisuddi)-Bandhas (Jalandharabandha-Uddiyanabandha-Mulabandha)-Sudhikriyas(Kapalabhati)-Mudras-Dhyana-Meditation-Gandhian way of Meditation.

LECTURE SCHEDULE

No. of week (1 hr. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">History of Yoga-Definition of the term yoga-Comprehensive Nature and Scope Yoga-Aims and Objectives of Yoga-Variou School of Yoga.
4 th to 6 th Week	<ul style="list-style-type: none">Pantanjali yoga-Astangayoga-Tantrayoga-Mantrayoga-Halthayoga-Layayoga, Rajayoga-Ganayoga-Bhaktiyoga-Karmayoga.
7 th to 10 th Week	<ul style="list-style-type: none">Yoga as an ideal system of physical culture-Do's and Don'ts of specific Yogic Techniques-8th week : Mid-Semester ExaminationsDifference between practice of Asanas and Physical Exercises-Modern Vs. Yogic concept on diet.

11 th to 13 th Week	<ul style="list-style-type: none"> • Preparing Oneself for Yogi practices –Different kinds of Yogic practices- Suryanamaskar-Asanas (Padmasana-Vajrasana-Gomukhasana-Sarvangasana • Halasana-Shalabhasana-Dhanurasana-Paschimottanasana-Yogamudra-Utkatasana-Savasana-Makarasana.
14 th to 16 th Week Total : 15hrs	<ul style="list-style-type: none"> • Parnayamas (Anuloma-Viloma Pranayama, Nadisuddi)-Bandhas (Jalandharabandha-Uddiyananbandha-Mulabandha)- • Suddhikriyas(Kapalabhati)-Mudras-Dhyana-Meditation-Gandhiyan way of Meditation.

Text Books:

1. Yoga For All, Maharishi Patanjali, Sahni Publications, 2003.
2. Yoga For Health, Institute of Naturopathy and Yogic Sciences, Bangalore, 2003.
3. Yoga For Health, K.Chandra Shekar, Khel Sathitya Kendra, Theni,2003.
4. Yoga For the Modern Man, M.P.Pandit, Sterling Publishers Private Limited, New Delhi,1987.

REFERENCES

- 1.Asanas, Swami Kuvalayananda, Kaivalaydhama, Lonavla, 1993.
- 2.Light on Yoga, B.K.S. Lyengar Harpine Collins Publication, New Delhi,2000
- 3.Sound Health Through Yoga, K.Chandrasekaran, Prem kalian Publications, Sedapatti 1999.
- 4.Yoga For You, Indira Devi, Jaico Publishing house, Chennai,2002.

MATERIAL TESTING

(Course Code: 18FADV0428)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objective

- To enable the students to learn about the Footwear & Products Testing
- To make the students understand the various types of testing methods.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in sampling of leather for physical and chemical testing. Physical and chemical testing of footwear and footwear materials.

UNIT-I

Sampling-conditioning-measurement of thickness of leathers - % elongation at break, tensile strength-tongue, tear strength-split tear strength-slit tear strength-double hole stitch tear strength

UNIT-II

Physical and chemical requirements of upper and lining leather-grain crackiness - pipeness-rub fastness (wet and dry)-water proofness - flexing endurance-abrasion resistance

UNIT – III

Footwear bond strength-upper materials –adhesive peeling from upper-non coalescence-adhesive cohesive failure-adhesive peeling from sole-sole break down

UNIT – IV

Synthetic soles-thickness-hardness-density- archimides principle - Insoles-tensile properties-water absorption and desorption-density of insole materials, soles tearing properties

UNIT – V

Footwear testing centres in India-water vapour permeability (leather)-water vapor absorption (Leather)-shoe flexing-beneward flexing- heat resistance - seam strength-water resistance-strap strength

LECTURE SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Sampling-conditioning-measurement of thickness of leathers - % elongation at break,• tensile strength-tongue, tear strength-split tear strength-slit tear strength-double hole stitch tear strength

4 th to 6 th Week	<ul style="list-style-type: none"> Physical and chemical requirements of upper and lining leather-grain crackness - pipeness-rub fastness (wet and dry)- Water proofness - flexing endurance-abrasion resistance
7 th to 10 th Week	<ul style="list-style-type: none"> Footwear bond strength-upper materials –adhesive peeling from upper-non coalescence-adhesive cohesive failure 8th week : Mid-Semester Examinations Adhesive peeling from sole-sole break down
11 th to 13 th Week	<ul style="list-style-type: none"> Synthetic soles-thickness-hardness-density- archimides principle – Insoles-tensile properties-water absorption and desorption-density of insole materials, soles tearing properties
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> Footwear testing centres in India-water vapour permeability (leather)-water vapor absorption (Leather)-shoe flexing- Beneward flexing- heat resistance - seam strength-water resistance-strap strength

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Footwear Testings – SATRA
2. CLRI publications

ILLUSTRATIONS OF LEATHER PRODUCTS (P)
(Course Code: 18FADV0429)

Credits: 0 + 3

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to make a different types of leather product in the illustrate form
- To make the students to understand the different types leather products and their structure in illustration.

Specific Learning Outcome:

After learning this paper the students will gain knowledge of leather products in a visual identifications and known the basic knowledge about the products.

Unit-I

Drawing of footwear mens

Casual shoe, formal shoes, flip flops, sandals, sports shoes, boots oxford, derby, phantafola, moccasin. Brogue shoes, loafers, boat shoes, sneaker shoes orthopaedic shoe skate shoes worishofer, clogs, sabton.

Unit-II

Drawing of footwear womens

Boots, floaters, gladiators, majaris, heels, wedges, sandls, beellies, flipflops, two part sandal jewel trim, sandal with gem trim, sequined sloe with full fleeriews of the shoe from different angles, fos sandal, evening sandal, ballet pump, plat form sandal, retro perforate court shoe, Birkenstock style sandal, thong sandal.

Unit-III

Drawing of footwear children's

Shoe, filp flops, sandals, boots, kitten heel shoe, loafers, jutti, jazz shoes, hurache shoe, jully shoes kung fu shoes, festivel willies

Unit-IV

Drawing mens accessories

Mens hals –profole hals, three quarter furred hats, full front hats, brim, gown, working the brim of the hat, across the forchead and the eye, angles of the hat follow – angles of the face, wallets bells, suspendess, socks, card haoldrs, key chains, head wraps, neektie, cufflinks, cravats, pocket squares, muffler, umberella.

Unit-V

Drawing womens Accessories

Womens hand bags and it varieties, belts, suspenderi, neecktier hair accessories hats and caps, head wraps, cufflinks, umbrellas, crawats, various bracelets.

PRACTICAL SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	Drawing of footwear mens Casual shoe, formal shoes, flip flops, sandals, sports shoes, boots oxford, derby, phantafola, moccasin. Brogue shoes, loafers, boat shoes, sneaker shoes orthopaedic shoe skate shoes worishofer, clogs, sabton.
4 th to 6 th Week	Drawing of footwear womens Boots, floaters, gladiators, majaris, heels, wedges, sandls, beellies, flipflops, two part sandal jewel trim, sandal with gem trim, sequined sloe with fulle flee riews of the shoe from different angles, fos sandal, evening sandal, ballet pump, plat form sandal, retro perforate court shoe, Birkenstock style sandal, thong sandal.
7 th to 10 th Week	Drawing of footwear children's Shoe, filp flops, sandals, boots, kitten heel shoe, loafers, jutti, jazz shoes, hurache shoe, jully shoes kung fu shoes, festivel willies
11 th to 13 th Week	Drawing mens accessories Mens hals –profole hals, three quarter furned hats, full front hats, brim, gown, working the brim of the hat, across the forehead and the eye, angles of the hat follow – angles of the face, wallets bells, suspendess, socks, card haoldrs, key chains, head wraps, neektie, cufflinks, cravats, pocket squares, muffler, umberella.
14 th to 15 th Week Total :60hours	Drawing womens Accessories Womens hand bags and it varieties, belts, suspenderi, neecktier hair accessories hats and caps, head wraps, cufflinks, umbrellas, crawats, various bracelets.

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology

REFERENCE

1. Manuals from CLRI
2. Manuals from NIMI Publications

SKILL BASED COMPONENTS

DESIGNING & PATTERN MAKING OF FOOTWEAR – I

(Course Code: 18FADV0430)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about Designing and Pattern Making of Footwear.
- To enable the students to gain knowledge on Footwear Designing.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in basics designs , masking methods, standard , bottom profile preparations for derby, oxford, pantafola, boot, moccasin, court shoe and sandals.

UNIT-I

- Introduction to
 1. Basic designs
 2. Designing tools
 3. Pattern cutting techniques
 4. Last
 5. Safety precautions

UNIT-II

- Derivation of mean forme by different methods
 1. Masking
 2. Vacuum
 3. Slotted

UNIT-III

- Derivation of standards for
 1. Derby , 2. Oxford, 3. Slip on / pantafola
 4. Boot , 5. Moccasin, 6. Court shoe
 7. Sandals

UNIT-IV

- Preparation /Derivation of Bottom profiles
 1. Outsole
 2. Insole
 3. Insocks
 4. Half insocks
 5. Stiffner
 6. Toe puff
 7. Sandal insole

UNIT-V

Derivation/preparation of Derby upper, lining shell and sectional patterns.

Derivation of oxford upper, lining shell and sectional patterns.

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Basic designs• Designing tools• Pattern cutting techniques• Last• Safety precautions
4 th to 6 th Week	<ul style="list-style-type: none">• Masking• Vacuum• Slotted
7 th to 10 th Week	<ul style="list-style-type: none">• 8th week : Mid-Semester Examinations• Derivation of standards for• 1. Derby , 2. Oxford, 3. Slip on / pantafola• 4. Boot , 5. Moccasin, 6. Court shoe• Sandals
11 th to 13 th Week	<ul style="list-style-type: none">• Preparation /Derivation of Bottom profiles• Outsole• Insole• Insocks• Half insocks• Stiffner• Toe puff• Sandal insole
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none">• Derivation/preparation of Derby upper, lining shell and sectional patterns.• Derivation of oxford upper, lining shell and sectional patterns.

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Manual of Shoe Designing, Md. Sadique, CLRI.
2. Patrick, H.J. “Modern Pattern Cutting and Design, Mobbs & Lewis Ltd, Kettering, England, 1983.
3. Lyon, D., “Modern approach to footwear pattern cutting”, 2nd Edition, 1979.

DESIGNING & PATTERN MAKING OF LEATHER GOODS - I

(Course Code: 18FADV0431)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about Designing and Pattern Making of leather goods
- To enable the students to gain knowledge on leather goods designing.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in developing of upper and lining patterns for coin pouch, wallet, clutch purse, card case and cell phone pouch.

UNIT-I

Developing of coin pouch-Button and Zipper type

- Select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern
- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing.

UNIT-II

Developing of Men's & Women's wallet

- Select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern
- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing.

UNIT-III

Developing of clutch purse with three compartments model

- Select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern
- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing.

UNIT-IV

Developing of card caseflap type model

- select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern
- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing.

UNIT-V

Developing of cell phone pouch open and closed type model

- select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern
- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing.

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Developing of coin pouch Button and Zipper type <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns Make sure the measurements and allowance before manufacturing
4 th to 6 th Week	Developing of Men's & Women's wallet <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns Make sure the measurements and allowance before manufacturing
7 th to 10 th Week	Developing of clutch purse with three compartments model <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns • Make sure the measurements and allowance before manufacturing 8th week : Mid-Semester Examinations

11 th to 13 th Week	<p>Developing of card case flap type model</p> <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns <p>Make sure the measurements and allowance before manufacturing</p>
14 th to 15 th Week Total :60hours	<p>Developing of cell phone pouch open and closed type model</p> <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns <p>Make sure the measurements and allowance before manufacturing</p>

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

DESIGNING & PATTERN MAKING OF LEATHER GARMENTS – I

(Course Code: 18FADV0432)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about Designing and Pattern Making of leather garments
- To enable the students to gain knowledge on leather garments designing.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in developing of outer shell, inner shell, facing and fusing patterns for jacket, skirt, trousers.

UNIT-I

Developing of pattern
Measurement
Pattern making for leather garments
Front bodice
Back bodice
Sleeve

UNIT-II

Developing of Jacket(3 miniature)
Simple jacket
Attach hoodie
Attach zip

UNIT-III

Developing leather jacket(3 miniature)
Long coat
Sleeve
With pocket

UNIT-IV

Developing skirt
Plain skirt
Pleated skirt
Circular skirt

UNIT-V

Developing of trouser (3 miniature)

Pencil fit trouser

Pleated trouser

Bell bottom trouser

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Developing of pattern <ul style="list-style-type: none">• Measurement• Pattern making for leather garments• Front bodice• Back bodice• Sleeve
4 th to 6 th Week	Developing of Jacket(3 miniature) <ul style="list-style-type: none">• Simple jacket• Attach hoodie• Attach zip
7 th to 10 th Week	Developing leather jacket(3 miniature) <ul style="list-style-type: none">• Long coat• Sleeve• With pocket
11 th to 13 th Week	Developing skirt <ul style="list-style-type: none">• Plain skirt• Pleated skirt• Circular skirt
14 th to 16 th Week Total hours: 60	Developing of trouser (3 miniature) <ul style="list-style-type: none">• Pencil fit trouser• Pleated trouser• Bell bottom trouser

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

GRU-DTBU

LIFE STYLE ACCESSORIES DESIGNING

(Course Code: 15FADV05E4)

Credits: 0+4

(CFA=60+ ESE=40)

Objectives:

- To enable the students to learn the life style accessories
- To make the students understand the designing of life style accessories.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in history of garments, history of footwear, ergonomics and interactive scenario of the design elements. Gastrulas law and its importance in design. Semiotics in design, Brainstorming method of idea generation.

UNIT – I

History of art and architecture and its influences in product design. History of Garments, textiles and costumes.

UNIT – II

History of footwear and leather goods, relevance of personal accessories in respect of sociological status, visual appeal and Veblen conspicuous consumption, trickledown theory and its relevance in product history.

UNIT – III

Elements of theories of design, application of the basic elements of design, ergonomics and interactive scenario of the design elements.

UNIT – IV

The golden rule in nature and importance of it in design. Gastrulas law and its importance in design. Semiotics in design, Brainstorming method of idea generation.

UNIT – V

Understanding the consumer need and demand concept of space and patterns in nature, product usage and its categories, product mix and innovations. Design process for accessories, types of categories and usage of footwear and leather goods.

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• History of art and architecture and its influences in product design.• History of Garments, textiles and costumes.
4 th to 6 th Week	<ul style="list-style-type: none">•• History of footwear and leather goods, relevance of personal accessories in respect of sociological status, visual appeal• Veblen conspicuous consumption, trickledown theory and its relevance in product history.
7 th to 10 th Week	<ul style="list-style-type: none">• Elements of theories of design, application of the basic elements of design• Ergonomics and interactive scenario of the design elements.• 8th week : Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none">• The golden rule in nature and importance of it in design.• Gastrulas law and its importance in design. Semiotics in design, Brainstorming method of idea generation.
14 th to 16 th Week Total hours: 60	<ul style="list-style-type: none">• Understanding the consumer need and demand concept of space and patterns in nature, product usage and its categories, product mix and innovations.• Design process for accessories, types of categories and usage of footwear and leather goods.

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly.

REFERENCES

1. Manual from NIMI Publications
2. Manual from CLRI
3. Manual from FDDI

INTERNSHIP – IV

(Course code: 18FADV0433)

Credits: 0+3

(CFA=50)

Specific Learning Outcome:

After successful completion of internship programme students will gain knowledge in manufacturing methodology of different types of footwear, how to solve the upcoming problems and how to increase the productivity

Field Visit:

From a practical point of view, this approach also seems like it might be a very useful way to document the process of getting to grips with the literature on a subject – helping immensely when it comes to putting together. We have one week/ two week exposure visit at the beginning of first semester. During second semester, the students undertake needs assessment exercise at various shoe making/ shoe designing field sites. Documentation in the form of report should be submitted by the candidates for evaluation purpose. The field training component is spread over in all academic institutes to place the successful candidates.

SEMESTER - V
GENERAL COMPONENTS
MATERIAL MANAGEMENT

(Course Code: 18FADV0534)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students to learn the material management
- To make the students understand the material management

Specific Learning Outcome:

After learning this paper the students will gain knowledge in material management, supply chain management, material managements linkages, elements of production process cost involved in material managements.

UNIT – I

Introduction to materials management:

Meaning-definition-scope and functions of material management, objectives and advantages of material management-interfaces of materials management-internal and external interfaces-organization for material management

UNIT – II

Supply chain management:

Concept, objectives of supply-production and distribution system, role and management of flow of materials in supply chain management

UNIT – III

Material management linkages:

Linkages with other functional areas of management i.e. production, accounting and finance-marketing-HRM-IT-TQM-functions of functional areas of management

UNIT – IV

Elements of production process:

Familiarities with broad categories of production process used in industries. Commonly used machines and tools in industries

UNIT – V

Cost involved in material management:

General discussion on concept of cost and cost classification, specific cost associated with material management. Cost in short run-long run-revenue-profit

LECTURE SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Meaning-definition-scope and functions of material management, objectives and advantages of material management-interfaces of materials management-internal and external interfaces-• Organization for material management
4 th to 6 th Week	<ul style="list-style-type: none">• Concept, objectives of supply-production and distribution system,• Role and management of flow of materials in supply chain management
7 th to 10 th Week	<ul style="list-style-type: none">• Linkages with other functional areas of management i.e. production, accounting and finance-marketing• 8th week : Mid-Semester Examinations• HRM-IT-TQM-functions of functional areas of management
11 th to 13 th Week	<ul style="list-style-type: none">• Familiarities with broad categories of production process used in industries.• Commonly used machines and tools in industries
14 th to 16 th Week Total hours: 60	<ul style="list-style-type: none">• General discussion on concept of cost and cost classification, specific cost associated with material management.• Cost in short run-long run-revenue-profit

Text Books:

1. Dutt A.K. "Materials management:procedures, text and cases, Prentice Hall of India Pvt. Ltd., New Delhi
2. Gopalakrishnan.P. & Sundaresan. M, Materials management; An Integrated Approach, Prentice Hall of India, Pvt. Ltd. New Delhi
3. Varma.M.M., Essentials of Store Keeping and Purchasing, Sultanchand & Sons, New Delhi

REFERENCE

- 1.Dutt A.K. "Materials management:procedures, text and cases, Prentice Hall of India Pvt. Ltd., New Delhi
- 2.Gopalakrishnan.P. & Sundaresan. M, Materials management; An Integrated Approach, Prentice Hall of India, Pvt. Ltd. New Delhi
- 3.Varma.M.M., Essentials of Store Keeping and Purchasing, Sultanchand & Sons, New Delhi

CAD FOR LEATHER GOODS & GARMENTS

(Course Code: 15FADV0535)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to understand the CAD for leather goods & garments
- To make the students to understand the step involved in the CAD

Specific Learning Outcome:

After learning this paper the students will gain knowledge in goods and garments CAD operating systems. ladies' bag, Wallet, executive bag

UNIT-I

CAD for leather goods: hand bag

- Start leather goods CAD operating system for hand bag
- Prepare and digitize patterns for hand bag
- Edit digitized patterns for hand bag
- Take measurements and verify patterns for hand bag
- Perform nesting for hand bag,
- Plot and cut patterns using pattern plotter/cutter for hand bag

UNIT-II

CAD for leather goods:wallet for both men & women's

- Start leather goods CAD operating system for wallet
- Prepare and digitize patterns for wallet
- Edit digitized patterns for wallet
- Take measurements and verify patterns for wallet
- Perform nesting for wallet
- Plot and cut patterns using pattern plotter/cutter for wallet

UNIT-III

CAD for leather goods: Executive bag

- Start leather goods CAD operating system for executive bag
- Prepare and digitize patterns for executive bag
- Edit digitized patterns for executive bag

- Take measurements and verify patterns for executive bag
- Perform nesting for executive bag
- Plot and cut patterns using pattern plotter/cutter for executive bag

UNIT-IV

CAD for leather garments: Jackets with sleeves variations

- Start leather garment CAD operating systems for jackets
- Prepare and digitize patterns for-jackets,
- Edit digitized pattern for jackets
- Grade patterns using CAD for jackets
- Take measurements and verify patterns for jackets
- Perform nesting and laying for marker making for jackets
- Plot and cut patterns using pattern plotter/cutter for jackets
- Perform pattern conversion for jackets.

UNIT-V

CAD for leather garments: waist coat and its variations

- Start leather garment CAD operating systems for skirtsand waist coat
- Prepare and digitize patterns for skirtsand waist coat
- Edit digitized pattern for skirts and waist coat
- Grade patterns using CAD for skirts and waist coat
- Take measurements and verify patterns for skirts and waist coat
- Perform nesting and laying for marker making for skirts and waist coat
- Plot and cut patterns using pattern plotter/cutter for skirts and waist coat
- Perform pattern conversion for skirts and waist coat

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	1.CAD for leather goods:hand bag <ul style="list-style-type: none"> • Start leather goods CAD operating system for hand bag • Prepare and digitize patterns for hand bag • Edit digitized patterns for hand bag, • Take measurements and verify patterns for hand bag

	<ul style="list-style-type: none"> • Perform nesting for hand bag • Plot and cut patterns using pattern plotter/cutter for hand bag
4 th to 6 th Week	<p>2.CAD for leather goods:wallet for both men & women's</p> <ul style="list-style-type: none"> • Start leather goods CAD operating system for Prepare and digitize patterns for wallet • Edit digitized patterns for wallet • Take measurements and verify patterns for wallet • Perform nesting for wallet • Plot and cut patterns using pattern plotter/cutter for wallet
7 th to 10 th Week	<ul style="list-style-type: none"> • 8th week : Mid-Semester Examinations <p>3.CAD for leather goods: Executive bag</p> <ul style="list-style-type: none"> • Start leather goods CAD operating system for Executive bag • Prepare and digitize patterns for Executive bag • Edit digitized patterns for Executive bag • Take measurements and verify patterns for Executive bag • Perform nesting for Executive bag • Plot and cut patterns using pattern plotter/cutter for Executive bag
11 th to 13 th Week	<p>4.CAD for leather garments: Jackets with sleeves variations</p> <ul style="list-style-type: none"> • Start leather garment CAD operating systems for jackets • Prepare and digitize patterns for-jackets, • Edit digitized pattern for jackets • Grade patterns using CAD for jackets • Take measurements and verify patterns for jackets • Perform nesting and laying for marker making for jackets • Plot and cut patterns using pattern plotter/cutter for jackets • Perform pattern conversion for jackets.
14 th to 16 th Week Total hours: 60	<p>5.CAD for leather garments: waist coat and its variations</p> <ul style="list-style-type: none"> • Start leather garment CAD operating systems for jackets

	<ul style="list-style-type: none">• Prepare and digitize patterns for-jackets,• Edit digitized pattern for jackets• Grade patterns using CAD for jackets• Take measurements and verify patterns for jackets• Perform nesting and laying for marker making for jackets• Plot and cut patterns using pattern plotter/cutter for jackets• Perform pattern conversion for jackets.
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Text Books:

1. Modular employees skill text book from NIMI

REFERENCES

1. Manuals from Software suppliers
2. Handouts

SKILL BASED COMPONENTS
FOOTWEAR MANUFACTURING-II
(Course Code: 15FADV0536)

Credits:0 + 3

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to make a different types of footwear.
- To make the students to understand the different types footwear constructions.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in making of different style of footwear with different types of constructions and quality control inspections of full shoe.

UNIT-I

Making of derby shoe with stitch down construction

- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control of stitch down constructions

UNIT-II

Making of Oxford shoe with good year welted construction

- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control of good year welted constructions.

UNIT-III

Making of moccasin shoes –lace type

- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control of moccasin constructions

UNIT-IV

Making of ankle boot with strobel constructions

- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control of strobe constructions

UNIT-V

Making of sandal with cemented constructions

- Select the design
- Select the materials
- Cut the components
- Pre close the components
- Close the components
- Lasting the closed uppers
- Perform the finishing operations.
- Quality control of cemented constructions.

PRACTICAL SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Making of derby shoe with stitch down construction• Select the design• Select the materials• Cut the components• Pre close the components• Close the components• Lasting the closed uppers• Perform the finishing operations.• Quality control inspections of stitch down constructions
4 th to 6 th Week	<ul style="list-style-type: none">• Making of Oxford shoe with good year welted construction• Select the design• Select the materials• Cut the components• Pre close the components• Close the components• Lasting the closed uppers• Perform the finishing operations.• Quality control inspections of good year welted constructions
7 th to 10 th Week	<ul style="list-style-type: none">• Making of moccasin shoes –lace type• Select the design• Select the materials

	<ul style="list-style-type: none"> • Cut the components • Pre close the components • Close the components • Lasting the closed uppers • Perform the finishing operations. • Quality control inspections of moccasin constructions • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Making of ankle boot with strobel constructions • Select the design • Select the materials • Cut the components • Pre close the components • Close the components • Lasting the closed uppers • Perform the finishing operations. • Quality control inspections of strobel constructions
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> • Making of sandal with cemented constructions • Select the design • Select the materials • Cut the components • Pre close the components • Close the components • Lasting the closed uppers • Perform the finishing operations. • Quality control inspections of cemented constructions

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Modern shoe making – SATRA
2. Manual of shoe making – Clarks
3. Comprehensive Footwear Technology – S.N.Ganguly
4. Swam siddha manual by FDDI

LEATHER GOODS MANUFACTURING-II

(Course Code: 18FADV0537)

Credits: 0 + 3

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to make a different types of leather goods
- To make the students to understand the different types leather goods.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in making of different style of hand bags and their quality control inspections.

UNIT-I

Making of ladies' hand bag with top handle

- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the hand bag.

UNIT-II

Making of ladies' hand bag – Cross shoulder model

- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the hand bag.

UNIT-III

Making of school bag with double zipper

- Select the design
- Select the materials
- Prepare the patterns

- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the school bag.

UNIT-IV

Making of travel bag cylinder model

- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the travel bag.

UNIT-V

Making of lap top pouch bag

- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the lap top pouch bag.

PRACTICALSCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	Making of ladies' hand bag with top handle <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components

	<ul style="list-style-type: none"> • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the school bag.
4 th to 6 th Week	<p>Making of ladies' hand bag – Cross shoulder model</p> <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the hand bag
7 th to 10 th Week	<p>Making of school bag with double zipper</p> <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the hand bag. • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<p>Making of travel bag cylinder model</p> <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the travel bag.
14 th to 15 th Week Total :45hrs	<p>Making of lap top pouch bag</p> <ul style="list-style-type: none"> • Select the design • Select the materials

	<ul style="list-style-type: none">• Prepare the patterns• Cut the components• Perform folding and attaching• Sew the components• Do the finishing operations• Show case the lap top pouch bag.
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Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications
3. Manuals from FDDI

LEATHER GARMENTS MANUFACTURING–II

(Course Code: 18FADV0538)

Credits:0 + 3

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to make a different types of leather garments
- To make the students to understand the different types of leather garments

Specific Learning Outcome:

After learning this paper the students will gain knowledge in manufacturing of different types of garments and their quality control inspections.

UNIT-I

Making of leather over coat(2types)

- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the leather over coat

UNIT-II

Making leather bomber jacket (2types)

- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the leather bomber jacket

UNIT-III

Making of leather waist coat and pleated trouser(2types)

- Select the design
- Select the materials
- Prepare the patterns

- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the waist coat and pleated trouser

UNIT-IV

Making of leather Biker jacket (2types)

- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the Biker jacket

UNIT-V

Making leather field jacket(2types)

- Select the design
- Select the materials
- Prepare the patterns
- Cut the components
- Perform folding and attaching
- Sew the components
- Do the finishing operations
- Show case the field jacket

PRACTICAL SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	Making of leather over coat(2types) <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components

	<ul style="list-style-type: none"> • Do the finishing operations • Show case the half trouser
4 th to 6 th Week	<p>Making leather bomber jacket (2types)</p> <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the pleated trouser
7 th to 10 th Week	<p>Making of leather waist coat and pleated trouser(2types)</p> <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the long coat. • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<p>Making of leather Biker jacket (2types)</p> <ul style="list-style-type: none"> • Quality control inspection of leather trouser • Defects on leather • Stitch length • Stitch width • Skipped stitches • Attachments • Quality control inspection of leather half trouser • Defects on leather • Stitch length • Stitch width • Skipped stitches • Attachments
14 th to 15 th Week Total :45hrs	<p>Making leather field jacket(2types)</p> <ul style="list-style-type: none"> • Quality control inspection of leather pleated trouser • Defects on leather • Stitch length • Stitch width

	<ul style="list-style-type: none">• Skipped stitches• Attachments• Quality control inspection of leather long coat Defects on leather• Stitch length• Stitch width• Skipped stitches• Attachments
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Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications
3. Manuals from FDDI

GRU-DTBU

PORTFOLIO
(Course Code:18FADV0539)

Credits: 0+3

(CFA=60+ ESE= 40)

Objectives:

- To make students understand the importance and concepts of Portfolio presentation.
- To impart practical skills for portfolio presentation
- The quality in the portfolio is more important than the quantity so we would only expect to see the work and to try 10 pieces of work.
- Our focus on innovative thinking – evidence of unusual approaches to solving a problem.

Specific Learning Outcome:

After portfolio presentations the students will get confident on their products development skills – Designing , cutting, sewing , lasting and finishing.

Units

1. Last Development- Designing-Technical development- outsole Development-material footwear concept getting its first shape-developing by hand to get perfect shape-quality and fitting. Drawing skills demonstrating a range of techniques and style.
2. Designing-Design shape most vital part of the footwear developing process-designing perfect balance between the right lines. Right line and proportions to impart pleasure to eye and joy to the wears.
 - Making- Footwear involves modelling as per the interest-demonstration as portfolio.
 - It could be customized culture or fashion projects etc.
3. CAD Technical development- creativity own base patterns to get better understanding of the manufacturing process used by the clients. Experimental approach in 3D work to handling materials in unusual combination.
4. Outsole- Creating and outsole from first sketch to final proto type in developing an own identity within the footwear concepts.
5. Materials- All footwear concepts or design with speech sheets for the best material's and colour to be used.
6. Product Development- theme
 - Idea generation- quick initial doodles, sketches and thought process.
 - Development of ideas- Evidence of individual thinking.
 - An interest in footwear and fashion and product design.
 - Men's
 - Kids
 - Women's
 - Fashion and Sports- Technical Athletic and Team Sports
 - Indoor/Outdoor- Hiking, work wear and Sneakers
 - Back to school
 - Beach footwear
 - Last, Outsoles, outsoles specifications – Trend forecast
 - Trims and hard wear
 - Street Fashions

PRACTICAL SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Last Development- Designing-Technical development- outsold Development-material footwear concept getting its first shape-developing by hand to get perfect shape-quality and fitting. Drawing skills demonstrating a range if techniques and style. • Designing-Design shape most vital part of the footwear developing process-designing perfect balance between the right lines. Right line and proportions to import pleasure to eye and joy to the wears. • Making- Footwear involves modelling as per the interest-demonstration as portfolio. • It could be customized culture or fashion projects etc.
4 th to 6 th Week	<ul style="list-style-type: none"> • CAD Technical development- creativity own base patterns to get better understanding of the manufacturing process used by the clients. Experimental approach in 3D work to handling materials in unusual combination.
7 th to 10 th Week	<ul style="list-style-type: none"> • Outsole- Creating and outsole from first sketch to final proto type in developing an own identity within the footwear concepts • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Materials- All footwear concepts or design with speech sheets for the best material's and colour to be used.
14 th to 15 th Week Total :45hrs	<ul style="list-style-type: none"> • Idea generation- quick initial doodles, sketches and thought process. • Development of ideas- Evidence of individual thinking. • An interest in footwear and fashion and product design. • Men's • Kids • Women's • Fashion and Sports- Technical Athletic and Team Sports • Indoor/Outdoor- Hiking, work wear and Spleers • Back to school • Beach footwear • Last, Outsoles, outsoles specifications – Trend forecat • Trims and hard wear • Street Fashions

INTERNSHIP – V

(Course code: 18FADV0540)

Credits: 0+3

(CFA=50)

Specific Learning Outcome:

After successful completion of internship programme students will gain knowledge in manufacturing methodology of different types of footwear, how to solve the upcoming problems and how to increase the productivity

Field Visit:

From a practical point of view, this approach also seems like it might be a very useful way to document the process of getting to grips with the literature on a subject – helping immensely when it comes to putting together. We have one week/ two week exposure visit at the beginning of first semester. During second semester, the students undertake needs assessment exercise at various shoe making/ shoe designing field sites. Documentation in the form of report should be submitted by the candidates for evaluation purpose. The field training component is spread over in all academic institutes to place the successful candidates.

SEMESTER – VI

GENERAL COMPONENTS

ENTREPRENEURSHIP DEVELOPMENT

(Course Code: 18FADV0641)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students to learn the Entrepreneurship Development.
- To make the students understand the Entrepreneurship opportunities.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in Entrepreneurship, Entrepreneurial Development, Project Management, Finance and Marketing, small industry set up.

Unit I

Entrepreneur and Entrepreneurship - Concept, Definition, Role and Importance in Indian Economy, Theories of Entrepreneurship, Entrepreneurial Traits and Motivation, Entrepreneurs Vs Professional Managers, Future challenges.

Unit II

Entrepreneurial Development: Entrepreneurial Environment – Meaning, Private Enterprise and Development, Significance of Entrepreneurial Development Programmes, Meaning Evolution and Objectives of EDP, Institutional efforts to develop Entrepreneurship, Operational Problem of EDPs

Unit III

Project Management: Search for Business idea, Concepts of Projects and Classification, Project Identification, Project formulation, Project Design and Network Analysis, Project Report, Project Appraisal, Factory design and Plant Layout, Financial Analysis- Risk and Return Unit

Unit IV

Finance and Marketing: Finance: Sources of Development Finance, Project Financing Institutions- Financial Institutions, Consultancy, Organisations. Marketing: Methods, Channel of Marketing, Marketing Institutions and Assistance.

Unit V

Small Industry Setup: Considerations in Selection of Particular Form of Organisations- Sole proprietorship, Partnership, Joint Stock Company, Cooperative Organisations- Their Merits, Limitations, Suitability, Brief Procedure of Incorporation. :Location for a Small Industry, Steps of Starting a small Industry, Incentives and Subsidies, Exploring Export Possibilities, Problems of Entrepreneurship.

LECTURE SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Entrepreneur and Entrepreneurship - Concept, Definition, Role and Importance in Indian Economy, • Theories of Entrepreneurship, Entrepreneurial Traits and Motivation, Entrepreneurs Vs Professional Managers, Future challenges.
4 th to 6 th Week	<ul style="list-style-type: none"> • Entrepreneurial Development: Entrepreneurial Environment – Meaning, Private Enterprise and Development, Significance of Entrepreneurial Development Programmes, • Meaning Evolution and Objectives of EDP, Institutional efforts to develop Entrepreneurship, Operational Problem of EDPs
7 th to 10 th Week	<ul style="list-style-type: none"> • Project Management: Search for Business idea, Concepts of Projects and Classification, Project Identification, Project formulation, • 8th week : Mid-Semester Examinations • Project Design and Network Analysis, Project Report, Project Appraisal, Factory design and Plant Layout, Financial Analysis- Risk and Return Unit
11 th to 13 th Week	<ul style="list-style-type: none"> • Finance and Marketing: Finance: Sources of Development Finance, Project Financing Institutions- • Financial Institutions, Consultancy, Organisations. Marketing: Methods, Channel of Marketing, Marketing Institutions and Assistance.
14 th to 16 th Week Total hours: 60	<ul style="list-style-type: none"> • Small Industry Setup: Considerations in Selection of Particular Form of Organisations- Sole proprietorship, Partnership, Joint Stock Company, Cooperative Organisations- Their Merits, Limitations, Suitability, • Brief Procedure of Incorporation. :Location for a Small Industry, Steps of Starting a small Industry, Incentives and Subsidies, Exploring Export Possibilities, Problems of Entrepreneurship.

Text Books:

1. Dynamics of Entrepreneurial Development Management Vasant Desai, Himalaya Publishing House.
2. Entrepreneurial Development S.S. Khanna Entrepreneurship & Small Business Management CL Bansal, Haranand Publication
3. Entrepreneurial Development in India Sami Uddin, Mittal Publication

REFERENCES

1. Entrepreneur Vs Entrepreneurship- Human Diagnosis of Development Banking Nagendra P. Singh, Asian society for Entrepreneurship Education and development

COSTING OF LEATHER PRODUCTS

(Course Code: 18FADV0642)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To provide trainees the skills, knowledge and attitudes required to calculate and establish costs for leather products.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in identifying cost items for footwear, goods and garments. Calculating total cost and documentations.

UNIT-I

Identify cost items of Derby shoe,

- Obtaining and verifying details of job requirements and specifications
- Determination and estimation of types and quantities of materials including accessories required for work of
- Identification and estimation of labor requirements to perform required work
- Estimation of time requirements to perform the work
- Developing and recording details of product to be produced
- Calculate total product cost
- Calculating total materials costs and labour cost
- Calculating total job cost including overheads and mark-up percentages
- Final cost is calculated
- Document
- Costing sheets for cost items
- Verification of cost, calculations and other details as required by supervisor
- Documenting details of costs and charges for future reference.

UNIT-II

Identify cost items of Oxford shoe Moccassin, Boots,

- Obtaining and verifying details of job requirements and specifications
- Determination and estimation of types and quantities of materials including accessories required for work
- Identification and estimation of labor requirements to perform required work
- Estimation of time requirements to perform the work
- Developing and recording details of product to be produced
- Calculate total product cost
- Calculating total materials costs and labour cost
- Calculating total job cost including overheads and mark-up percentages
- Final cost is calculated
- Document
- Costing sheets for cost items
- Verification of cost, calculations and other details as required by supervisor
- Documenting details of costs and charges for future reference.

UNIT-III

Identify cost items of Moccassin and Boots,

- Obtaining and verifying details of job requirements and specifications
- Determination and estimation of types and quantities of materials including accessories required for work
- Identification and estimation of labor requirements to perform required work
- Estimation of time requirements to perform the work
- Developing and recording details of product to be produced
- Calculate total product cost
- Calculating total materials costs and labour cost
- Calculating total job cost including overheads and mark-up percentages
- Final cost is calculated
- Document
- Costing sheets for cost items
- Verification of cost, calculations and other details as required by supervisor
- Documenting details of costs and charges for future reference.

UNIT-IV

Identify cost items of Jacket, apron, trouser, skirt.

- Obtaining and verifying details of job requirements and specifications
- Determination and estimation of

types and quantities of materials including accessories required for work

- Identification and estimation of labor requirements to perform required work
- Estimation of time requirements to perform the work
- Developing and recording details of product to be produced
- Calculate total product cost
- Calculating total materials costs and labour cost
- Calculating total job cost including overheads and mark-up percentages
- Final cost is calculated
- Document
- Costing sheets for cost items
- Verification of cost, calculations and other details as required by supervisor
- Documenting details of costs and charges for future reference.

UNIT-V

Identify cost items of Wallet, purse, ladies bag and travel bag.

- Obtaining and verifying details of job requirements and specifications
- Determination and estimation of types and quantities of materials including accessories required for work of
- Identification and estimation of labor requirements to perform required work
- Estimation of time requirements to perform the work
- Developing and recording details of product to be produced
- Calculate total product cost
- Calculating total materials costs and labour cost
- Calculating total job cost including overheads and mark-up percentages
- Final cost is calculated
- Document
- Costing sheets for cost items
- Verification of cost, calculations and other details as required by supervisor
- Documenting details of costs and charges for future reference.

LECTURE SCHEDULE

No. of week (4hrs. per week)	Topics covered
1 st to 3 rd Week	<p data-bbox="459 528 804 562">Identify cost items of Derby,</p> <ul data-bbox="608 580 1417 1435" style="list-style-type: none"><li data-bbox="608 580 1155 647">• Obtaining and verifying details of job requirements and specifications<li data-bbox="608 665 1417 763">• Determination and estimation of types and quantities of materials including accessories required for work<li data-bbox="608 781 1378 853">• Identification and estimation of labor requirements to perform required work<li data-bbox="608 871 1254 904">• Estimation of time requirements to perform the work<li data-bbox="608 922 1342 956">• Developing and recording details of product to be produced<li data-bbox="608 974 983 1008">• Calculate total product cost<li data-bbox="608 1025 1230 1059">• Calculating total materials costs and labour cost<li data-bbox="608 1077 1417 1149">• Calculating total job cost including overheads and mark-up percentages<li data-bbox="608 1167 927 1200">• Final cost is calculated<li data-bbox="608 1218 780 1252">• Document<li data-bbox="608 1270 999 1303">• Costing sheets for cost items<li data-bbox="608 1321 1417 1393">• Verification of cost, calculations and other details as required by supervisor<li data-bbox="608 1411 1401 1444">• Documenting details of costs and charges for future reference.

4 th to 6 th Week	<p>Identify cost items of Oxford,</p> <ul style="list-style-type: none">• Obtaining and verifying details of job requirements and specifications• Determination and estimation of types and quantities of materials including accessories required for work• Identification and estimation of labor requirements to perform required work• Estimation of time requirements to perform the work• Developing and recording details of product to be produced• Calculate total product cost• Calculating total materials costs and labour cost• Calculating total job cost including overheads and mark-up percentages• Final cost is calculated• Document• Costing sheets for cost items• Verification of cost, calculations and other details as required by supervisor• Documenting details of costs and charges for future reference.
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7 th to 10 th Week	<p>Identify cost items of Moccasin and Boots,</p> <ul style="list-style-type: none"> • Obtaining and verifying details of job requirements and specifications • Determination and estimation of types and quantities of materials including accessories required for work • Identification and estimation of labor requirements to perform required work • Estimation of time requirements to perform the work • Developing and recording details of product to be produced • Calculate total product cost • Calculating total materials costs and labour cost • Calculating total job cost including overheads and mark-up percentages • Final cost is calculated • Document • Costing sheets for cost items • Verification of cost, calculations and other details as required by supervisor • Documenting details of costs and charges for future reference.
11 th to 13 th Week	<p>Identify cost items of Jacket, apron, trouser , skirt.</p> <ul style="list-style-type: none"> • Obtaining and verifying details of job requirements and specifications • Determination and estimation of types and quantities of materials including accessories required for work • Identification and estimation of labor requirements to perform required work • Estimation of time requirements to perform the work • Developing and recording detail of product to be produced • Calculate total product cost • Calculating total materials costs and labour cost • Calculating total job cost including overheads and mark-up percentages • Final cost is calculated • Document • Costing sheets for cost items • Verification of cost, calculations and other details as required

	<p>by supervisor</p> <ul style="list-style-type: none"> • Documenting details of costs and charges for future reference. • 8th week : Mid-Semester Examinations
<p>14th to 16th Week Total hours: 60</p>	<p>Identify cost items of Wallet, purse, ladies bag, travel bag.</p> <ul style="list-style-type: none"> • Obtaining and verifying details of job requirements and specifications • Determination and estimation of types and quantities of materials including accessories required for work • Identification and estimation of labor requirements to perform required work • Estimation of time requirements to perform the work • Developing and recording details of product to be produced • Calculate total product cost • Calculating total materials costs and labour cost • Calculating total job cost including overheads and mark-up percentages • Final cost is calculated • Document • Costing sheets for cost items • Verification of cost, calculations and other details as required by supervisor • Documenting details of costs and charges for future reference.

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCE

1. CLRI – publications
2. NIMI Publications

CAD FOR FOOTWEAR

(Course Code: 18FADV0643)

Credits:0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to understand the CAD for shoe
- To make the students to understand the step involved in the CAD

Specific Learning Outcome:

After learning this paper the students will gain knowledge in digitizing of shell, piece making, mirroring of pieces, adding of notches and fillets, assessments of the patterns, grading of one styles to another.

UNIT-I

Lay out and digitizations:

- Digitize the shell
- Prepare the digitizing layout
- Digitize the styles-in 2D shape
- Check digitized file for errors

UNIT-II

File creations:

- Translate the digitized file to graphics
- Store the file on the hard disc
- Plot the SHELL for evaluation of digitizing

UNIT-III

Modifications:

- Edit or add digitized lines, if necessary
- Add offset lines for different allowances, variable offset for lasting allowance
- Define piece boundary, add fillets, notches

UNIT-IV

Adding of drills and stencils:

- Add different lines for drills and stencils
- Generate pattern assessment for all or selected pieces
- Define grade specification

UNIT-V

Grading:

- Grade the style either normally or apply modifiers for non standard gradings
- Check the graded styles using stack and measure functions
- Generate a cut file for cutting of patterns

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Lay out and digitization's: <ul style="list-style-type: none">• Digitize the shell• Prepare the digitizing layout• Digitize the styles-in 2D shape• Check digitized file for errors
4 th to 6 th Week	File creations: <ul style="list-style-type: none">• Translate the digitized file to graphics• Store the file on the hard disc• Plot the SHELL for evaluation of digitizing
7 th to 10 th Week	Modifications : <ul style="list-style-type: none">• Edit or add digitized lines, if necessary• Add offset lines for different allowances, variable offset for lasting allowance• Define piece boundary, add fillets, notches• 8th week : Mid-Semester Examinations
11 th to 13 th Week	Adding of drills and stencils: <ul style="list-style-type: none">• Add different lines for drills and stencils• Generate pattern assessment for all or selected pieces• Define grade specification
14 th to 16 th Week Total hours: 60	Grading : <ul style="list-style-type: none">• Grade the style either normally or apply modifiers for non standard gradings• Check the graded styles using stack and measure functions

- | | |
|--|---|
| | <ul style="list-style-type: none">• Generate a cut file for cutting of patterns |
|--|---|

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe designing by Md.Sadique Principal scientist clri Chennai.
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Manuals from Software suppliers
2. Handouts

GRU-DTBU

**SKILL BASED COMPONENTS
DESIGNING AND PATTERN MAKING OF FOOTWEAR – II**

(Course Code: 18FADV0644)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to designing & pattern making of footwear
- To make the students understand the steps involved in foot wear designing

Specific Learning Outcome:

After learning this paper the students will gain knowledge in developing and preparing of upper, lining shell and sectional patterns for derby, oxford, moccasin , ankle boot and sandals.

UNIT-I:

Developing patterns for Derby models

- Masking the Last
- Make in and out side forme
- Make mean forme
- Make a W standard
- Make a upper base
- Make a upper shell
- Make a upper components
- Make a lining shell
- Make a lining components
- Make a bottom profiles.

UNIT-II

Developing patterns for Oxford models

- Masking the Last
- Make in and out side forme
- Make mean forme
- Make a W standard
- Make a upper base
- Make a upper shell
- Make a upper components
- Make a lining shell
- Make a lining components
- Make a bottom profiles.

UNIT-III

Developing patterns for Moccasin models (lace type)

- Masking the Last
- Make in and out side forme
- Make mean forme
- Make a W standard
- Make a upper base
- Make a upper shell
- Make a upper components
- Make a lining shell
- Make a lining components
- Make a bottom profiles.

UNIT-IV

Developing patterns for Ankle boot

- Masking the Last
- Make in and out side forme
- Make mean forme
- Make a W standard
- Make a upper base
- Make a upper shell
- Make a upper components
- Make a lining shell
- Make a lining components
- Make a bottom profiles.

UNIT-V

Developing patterns for Sandals

- Masking the Last
- Make in and out side forme
- Make mean forme
- Make a W standard
- Make a upper base
- Make a upper shell
- Make a upper components
- Make a lining shell
- Make a lining components

- Make a bottom profiles.

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Developi patterns for Derby models <ul style="list-style-type: none"> • Masking the Last • Make in and out side forme • Make mean forme • Make a W standard • Make a upper base • Make a upper shell • Make a upper components • Make a lining shell • Make a lining components • Make a bottom profiles.
4 th to 6 th Week	Developing Oxford models <ul style="list-style-type: none"> • Masking the Last • Make in and out side forme • Make mean forme • Make a W standard • Make a upper base • Make a upper shell • Make a upper components • Make a lining shell • Make a lining components • Make a bottom profiles.
7 th to 10 th Week	Developing patterns for Moccasin models (lace type) <ul style="list-style-type: none"> • Masking the Last • Make in and out side forme • Make mean forme • Make a W standard • Make a upper base • Make a upper shell

	<ul style="list-style-type: none"> • Make a upper components • Make a lining shell • Make a lining components • Make a bottom profiles. • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<p>Developing patterns for Ankle boot</p> <ul style="list-style-type: none"> • Masking the Last • Make in and out side forme • Make mean forme • Make a W standard • Make a upper base • Make a upper shell • Make a upper components • Make a lining shell • Make a lining components • Make a bottom profiles
14 th to 16 th Week Total hours: 60	<p>Developing patterns for Sandals</p> <ul style="list-style-type: none"> • Masking the Last • Make in and out side forme • Make mean forme • Make a W standard • Make a upper base • Make a upper shell • Make a upper components • Make a lining shell • Make a lining components • Make a bottom profiles.

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe designing by Md.Sadique Principal scientist clri Chennai.
3. Comprehensive Footwear Technology– S.N.Ganguly

REFERENCES

1. Modern shoe making – SATRA
2. Manual of shoe making – Clarks
3. Swam siddha manual by FDDI

DESIGNING AND PATTERN MAKING OF LEATHER GOODS – II

(Course Code: 15FADV0645)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to designing & pattern making of leather goods
- To make the students understand the steps involved in leather goods designing

Specific Learning Outcome:

After learning this paper the students will gain knowledge in designing and developing of upper and lining patterns for different types of ladies hand bags, school bag, travel bags.

UNIT-I

Developing of ladies' hand bag - tote model

- Select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern
- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing

UNIT-II

Developing ladies' hand bag- shoulder model

- Select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern
- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing

UNIT-III

Developing of school bag – single compartment

- Select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern

- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing

UNIT-IV

Developing of travel bag

- Select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern
- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing

UNIT-V

Developing of executive bag

- Select the design
- Sketch the design
- Prepare a net upper pattern
- Check the pattern against the selected design and measurements
- Prepare a upper pattern with allowances
- Prepare a lining pattern
- Assemble the upper and lining patterns
- Make sure the measurements and allowance before manufacturing

PRACTICAL SCHEDULE

No. of week (4hrs. per week)	Topics covered
1 st to 3 rd Week	Ladies' hand bag - tote model <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns • Make sure the measurements and allowance before manufacturing
4 th to 6 th Week	Ladies' hand bag- shoulder model <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns • Make sure the measurements and allowance before manufacturing
7 th to 10 th Week	School bag – single compartment <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern

	<ul style="list-style-type: none"> • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns • Make sure the measurements and allowance before manufacturing • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<p>Travel bag</p> <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns • Make sure the measurements and allowance before manufacturing
14 th to 16 th Week Total hours: 60	<p>Executive bag</p> <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare a net upper pattern • Check the pattern against the selected design and measurements • Prepare a upper pattern with allowances • Prepare a lining pattern • Assemble the upper and lining patterns • Make sure the measurements and allowance before manufacturing

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

DESIGNING AND PATTERN MAKING OF LEATHER GARMENTS - II

(Course Code: 18FADV0646)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to designing & pattern making of leather garments
- To make the students understand the steps involved in leather garments designing

Specific Learning Outcome:

After learning this paper the students will gain knowledge in developing outer shell, inner shell, facing and fusing patterns for trouser, half trouser, pleated trouser, long coat and jacket without sleeves.

Unit -I

Developing of Leather over coat(2types)

- Select the design
- Sketch the design
- Prepare a outer shell
- Prepare a inner shell
- Prepare a facing pattern
- Prepare a fusing pattern
- Check the pattern against the selected design and measurements
- Assemble the upper and lining patterns
- Ensure the measurements and allowance before manufacturing

Unit -II

Developing of Leather bomber jacket

- Select the design
- Sketch the design
- Prepare a outer shell
- Prepare a inner shell
- Prepare a facing pattern
- Prepare a fusing pattern
- Check the pattern against the selected design and measurements
- Assemble the upper and lining patterns
- Ensure the measurements and allowance before manufacturing

Unit -III

Developing and pleated trouser(2types)

- Select the design
- Sketch the design
- Prepare a outer shell
- Prepare a inner shell
- Prepare a facing pattern
- Prepare a fusing pattern
- Check the pattern against the selected design and measurements
- Assemble the upper and lining patterns
- Ensure the measurements and allowance before manufacturing

Unit -IV

Developing of biker jacket(2types)

- Select the design
- Sketch the design
- Prepare a outer shell
- Prepare a inner shell
- Prepare a facing pattern
- Prepare a fusing pattern
- Check the pattern against the selected design and measurements
- Assemble the upper and lining patterns
- Ensure the measurements and allowance before manufacturing

Unit -V

Developing of Field jacket(2types)

- Select the design
- Sketch the design
- Prepare a outer shell
- Prepare a inner shell
- Prepare a facing pattern
- Prepare a fusing pattern
- Check the pattern against the selected design and measurements
- Assemble the upper and lining patterns
- Ensure the measurements and allowance before manufacturing

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Developing of Leather over coat(2types) <ul style="list-style-type: none">• Select the design• Select the materials• Prepare the patterns• Cut the components• Perform folding and attaching• Sew the components• Do the finishing operations• Show case the trouser.
4 th to 6 th Week	Developing of Leather bomber jacket <ul style="list-style-type: none">• Select the design• Select the materials• Prepare the patterns• Cut the components• Perform folding and attaching• Sew the components• Do the finishing operations• Show case the half trouser.•
7 th to 10 th Week	Developing and pleated trouser (2types) <ul style="list-style-type: none">• Select the design• Select the materials• Prepare the patterns• Cut the components

	<ul style="list-style-type: none"> • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the pleated trouser. • 8th week : Mid-Semester Examinations
11 th to 13 th Week	Developing of biker jacket(2types) <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the long coat.
14 th to 16 th Week Total hours: 60	Developing of Field jacket(2types) <ul style="list-style-type: none"> • Select the design • Select the materials • Prepare the patterns • Cut the components • Perform folding and attaching • Sew the components • Do the finishing operations • Show case the jacket.

Text Books:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly.

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

PROJECT

(Course Code: 18FADV0647)

Credits: 0+6

(CFA=100)

Final year under graduate students at the end of final semester under goes a minor research work. Based on the curriculum/ area of interest by the individual has been focused with objectives, and detailed work on literature, methodology, result analysis and submitting as bound work with summary ,conclusion with evidence of tools used, appendix. This will be evaluated as per the scheme.

GRU-DTBU

ELECTIVE PAPERS

PRODUCTS DEVELOPMENT IN FOOTWEAR (Course Code: 18FADV05E1)

Credits:0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about products development in footwear
- To enable the students to gain knowledge on products development in footwear.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in designing, cutting, pre closing, closing and lasting of different types of men's and ladies footwear and sandals.

UNIT-I

Selection of footwear's :suitable to men/ladies / children, footwear/sandals, Designing and pattern making, cutting, pre- closing, closing and finishing of men's footwear/sandals

UNIT-II

Designing and pattern making, cutting, pre- closing, closing and finishing of Ladies footwear/sandals

UNIT-III

Designing and pattern making, cutting, pre- closing, closing and finishing of children's footwear/sandals.

UNIT-IV

Designing and pattern making, cutting, pre- closing, closing and finishing of need based – Diabetic footwear, disables designing, comfort footwear/sandals

UNIT-V

Working and designing costing, raw materials for men's footwear/ladies footwear/sandals, Costing and show casing of men's footwear/ladies footwear/sandals.

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Selection of products – men's footwear/ladies footwear/sandals• Designing and pattern making of men's footwear/ladies footwear/sandals• Cutting of men's footwear/ladies footwear/sandals
4 th to 6 th Week	<ul style="list-style-type: none">• Pre – closing of men's footwear/ladies footwear/sandals• Closing of men's footwear/ladies footwear/sandals

7 th to 10 th Week	<ul style="list-style-type: none"> • Lasting and making of men's footwear/ladies footwear/sandals • Finishing of men's footwear/ladies footwear/sandals • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Process flow chart for men's footwear/ladies footwear/sandals • Bill of materials for men's footwear/ladies footwear/sandals
14 th to 16 th Week Total hours: 60	<ul style="list-style-type: none"> • Costing of men's footwear/ladies footwear/sandals • Show casing of men's footwear/ladies footwear/sandals

Text Books:

1. J.H. Thornton, Text book of footwear Manufacture, National Trade Press Book Ltd., London, 1970
2. Manual of shoe making – clarks ltd
3. Comprehensive Footwear Technology by S.N.Ganguly

REFERENCES:

1. Modern Shoe Making – Lasting, SATRA Publication
2. Manual of Shoe Making, Clarks Ltd., London,

PRODUCTS DEVELOPMENT IN LEATHER GOODS
(Course Code: 18FADV05E2)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about products development in leather goods
- To enable the students to gain knowledge on products development in leather good

Specific Learning Outcome:

After learning this paper the students will gain knowledge in making of ladies hand bag, travel bag and executive bag.

UNIT-I

Selection of products – ladies hand bag/travel bag/executive bag- Designing and pattern making, Cutting, Pre – closing, Closing, making and finishing of ladies hand bags./travel bag/executive bags

UNIT-II

Travel bag - Designing and pattern making, Cutting, Pre – closing, Closing, making and finishing of travel bags.

UNIT-III

Executive bag- Designing and pattern making, Cutting, Pre – closing, Closing, making and finishing of executive bags

UNIT-IV

Designing and pattern making, Cutting, Pre – closing, Closing, making and finishing of innovative goods, wealth out of waste, wall hangers, car accessories, interior decorative pieces, wall and floor and door decorations.

UNIT-V

Costing and Show casing of developed products for display and sale.

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Selection of products – ladies hand bag/travel bag/executive bag • Designing and pattern making of ladies hand bag/travel bag/executive bag • Cutting of ladies hand bag/travel bag/executive bag • innovative goods, wealth out of waste, wall hangers, car accessories, interior decorative pieces, wall and floor and door decorations
4 th to 6 th Week	<ul style="list-style-type: none"> • Pre – closing of ladies hand bag/travel bag/executive bag • Closing of ladies hand bag/travel bag/executive bag • innovative goods, wealth out of waste, wall hangers, car accessories, interior decorative pieces, wall and floor and door decorations
7 th to 10 th Week	<ul style="list-style-type: none"> • Lasting and making of ladies hand bag/travel bag/executive bag • Finishing of ladies hand bag/travel bag/executive bag • 8th week : Mid-Semester Examinations • innovative goods, wealth out of waste, wall hangers, car accessories, interior decorative pieces, wall and floor and door decorations
11 th to 13 th Week	<ul style="list-style-type: none"> • Process flow chart for ladies hand bag/travel bag/executive bag

	<ul style="list-style-type: none"> • Bill of materials for ladies hand bag/travel bag/executive bag • innovative goods, wealth out of waste, wall hangers, car accessories, interior decorative pieces, wall and floor and door decorations
14 th to 16 th Week Total hours: 60	<ul style="list-style-type: none"> • Costing of ladies hand bag/travel bag/executive bag • Show casing of ladies hand bag/travel bag/executive bag • innovative goods, wealth out of waste, wall hangers, car accessories, interior decorative pieces, wall and floor and door decorations

Text Books:

1. J.H. Thornton, Text book of footwear Manufacture, National Trade Press Book Ltd., London, 1970.
2. Comprehensive footwear Technology by S.N.GANGULY
3. Manual of Shoe Making, Clarks Ltd., London, 1978.

REFERENCES:

1. Manuals from NIMI Publication
2. Manuals from CLRI

GRIP-DTBU

PRODUCTS DEVELOPMENT IN LEATHER GARMENTS
(Course Code: 18FADV05E3)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about products development in leather garments
- To enable the students to gain knowledge on products development in leather garments

Specific Learning Outcome:

After learning this paper the students will gain knowledge in making of jacket, trouser and long coat.

UNIT-I

Selection of products jacket/trouser/long coat – jacket/Designing Process flow chart for jacket/trouser/long coat and pattern making of jacket/trouser/long coat Cutting of jacket,Pre – closing and finishing of jacket.

UNIT-II

Long coat, Designing and pattern making of jacket Cutting ,Pre – closing of long coat Closing and finishing of Coat

UNIT-III

Trouser/ Designing and pattern making of trouser/ cutting of trouser, Pre – closing of trouser. closing and finishing of trouser

UNIT-IV

Accessories Types, selection, suitability, and fixing for the designed products. Fabricating of jacket/trouser/long coat

UNIT-V

Costing of jacket/trouser/long coat – raw material cost, stitching cost, designing, accessories, suitability and finishes, Show casing of jacket/trouser/long coat

PRACTICAL SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Selection of products – jacket/trouser/long coat • Designing and pattern making of jacket/trouser/long coat • Cutting of jacket/trouser/long coat
4 th to 6 th Week	<ul style="list-style-type: none"> • Pre – closing of jacket/trouser/long coat • Closing of jacket/trouser/long coat
7 th to 10 th Week	<ul style="list-style-type: none"> • Fabricating of jacket/trouser/long coat • Finishing of jacket/trouser/long coat • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Process flow chart for jacket/trouser/long coat • Bill of materials for jacket/trouser/long coat
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • Costing of jacket/trouser/long coat • Show casing of jacket/trouser/long coat

Text Books:

1. J.H. Thornton, Text book of footwear Manufacture, National Trade Press Book Ltd., London, 1970.
- 2.Modern Shoe Making – Lasting, SATRA Publication

3. Manual of Shoe Making, Clarks Ltd., London, 197

REFERENCES:

1. Manuals from NIMI publications
2. manuals from CLRI

GRU-DTBU

SPORTS SHOE MANUFACTURING (T)
(Course Code: 18FADV05E4)

Credits: 4+0

(CFA= 40+

ESE=60)Objectives:

- To make the students understand about products development in leather garments
- To enable the students to gain knowledge on products development in leather garments

Specific Learning Outcome:

After learning this paper the students will gain knowledge in historical evaluation of sports and sports shoe, principles involved in sports shoe making and different types of sports shoe constructions.

Unit – I : Sports – various types of sports – origin of the sports – Historical evaluation of sports.

Unit - II : Athlete shoe – principle involved in making of Athlete shoes, materials, properties, function, comfort types of construction.

Unit - III : Shoe for Foot ball, Hockey – Principle involved in making, materials and their properties, functions, comfort, types of construction.

Unit - IV : Shoe for Cricket, Skating - Principle involved in making, materials and their properties, functions, comfort, types of construction.

Unit - V : Shoe for Trucking, Fishing, Badminton - Principle involved in making, materials and their properties, functions, comfort, types of construction.

LECTURE SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Sports – various types of sports – origin of the sports – Historical evaluation of sports.
4 th to 6 th Week	<ul style="list-style-type: none"> • Athlete shoe • principle involved in making of Athlete shoes, materials, properties, function, comfort types of construction
7 th to 10 th Week	<ul style="list-style-type: none"> • Shoe for Foot ball, Hockey • Principle involved in making, materials and their properties, functions, comfort, types of construction. • 8th week : Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Shoe for Cricket, Skating – • Principle involved in making, materials and their properties, functions, comfort, types of construction.
14 th to 16 th Week Total hours: 60	<ul style="list-style-type: none"> • Shoe for Trucking, Fishing, Badminton • Principle involved in making, materials and their properties, functions, comfort, types of construction

Text Books:

1. Nigg Benno.M Biomechanics of Running shoes. Human kinetics publishers, Inc 1986.
2. Rossi wiliam A, ed. The complete footwear Dictionary Krieger publishing, 1993.
3. The shoe in sport, Mosby – year book, 1989.

REFERENCES

- 1.Cavanagh, Peter.R “ The Running shoe book”
- 2.Cheskin Melvyn. P “ The complete hand book of athletic footwear” Fair child books 1986.

FOOTWEAR RETAILING (T)

(Course Code: 18FADV05E5)

Credits: 4+0

(CFA=40+

ESE=60)Objectives:

- To make the students understand about products development in leather garments
- To enable the students to gain knowledge on products development in leather garments

Specific Learning Outcome:

After learning this paper the students will gain knowledge in History of retailing, size of retail market, carriers in retailing. Retail formats, planning product range and feasibility of retail outlet. Depth & range of product mix, cost and viability of a new outlet. Inventory management

UNIT - I : History of retailing, size of retail market, carriers in retailing , Buying cycle, planning sourcing ranging , scope of plan –range profile , range with and stock depth ,average selling price, margin mix, and sales density

UNIT - II : Retail formats, planning product range and feasibility of retail outlet range planning and product development – identification of range needs – range boards , competitors, market trends, products orientation core and fashion ranges

UNIT - III : Depth & range of product mix, cost and viability of a new outlet, departments of stores store chains single unit independents stores.

UNIT - IV :

Classifications of major discount operations , characteristics of major discount operations buyers role. What of price ,timing a purchases , pricing , indirect purchasing , incentives of vendor.

UNIT - V : Retail pricing, costing and IT applications in retail purchasing in domestic market Vs purchasing in foreign markets. Reason , problems, methods , buyers qualification.

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	History of retailing, size of retail market, carriers in retailing , Buying cycle, planning sourcing ranging , scope of plan –range profile , range with and stock depth ,average selling price, margin mix, and sales density
4 th to 6 th Week	Retail formats, planning product range and feasibility of retail outlet range planning and product development – identification of range needs – range boards , competitors, market trends, products orientation core and fashion ranges

7 th to 10 th Week	Depth & range of product mix, cost and viability of a new outlet, departments of stores store chains single unit independents stores. 8th week : Mid-Semester Examinations
11 th to 13 th Week	Classifications of major discount operations , characteristics of major discount operations buyers rote. What of price ,timing a purchases , pricing , indirect purchasing , incentives of vendor.
14 th to 16 th Week Total hours: 60	Retail pricing, costing and IT applications in retail purchasing in domestic market Vs purchasing in foreign markets. Reason , problems, methods , buyers qualification.

Text Books:

1. Retail Management Berman B
2. Retail Management Levy Michael
3. Mail management: Singh & Shrinivasan

REFERENCES

1. Retail Management Berman B
2. Retail Management Levy Michael
3. Mail management: Singh & Shrinivasan

SAFETY SHOES MANUFACTURING (T)

(Course Code: 18FADV05E6)

Credits: 4 + 0

(CFA=40+ ESE=

60)Objectives:

- To make the students understand about products development in leather garments
- To enable the students to gain knowledge on products development in leather garments

Specific Learning Outcome:

After learning this paper the students will gain knowledge in principles and methodology involved in safety footwear manufacturing. Testing methods of safety footwear. Function of safety footwear.

UNIT – I

Introduction of safety footwear, principles and method of manufacturing of safety footwear, materials used for safety footwear- finishing and machinery

UNIT – II

Testing methods for safety footwear – measurement of back height, quarter height, seams strength, strap strength- toe load- whole top line strength – heel pull off- sole bond strength

UNIT – III

Safety footwear - toe cap impact resistance – steel midsole flexing – nail penetration – electrical resistance – hot , cold insulation materials- steel toe caps- TPU- aluminium - nubuck, patent, suede leathers

UNIT – IV

Functions of safety footwear – protect from falling and flying objects – punctures – cutting hazards – electrical hazards – slips, trips and falls- fatigue – burns – extreme weather

UNIT – V

Different types of foot deformities – types of deformities which could be corrected using footwear – introduction to orthosis – types – types of arch supports – specialized in outsole – different types of safety footwear

LECTURE SCHEDULE

No. of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Introduction of safety footwear, principles and method of manufacturing of safety footwear, materials used for safety footwear- finishing and machinery
4 th to 6 th Week	<ul style="list-style-type: none">• Testing methods for safety footwear – measurement of back height, quarter height, seams strength, strap strength- toe load- whole top line strength – heel pull off- sole bond strength
7 th to 10 th Week	<ul style="list-style-type: none">• Safety footwear - toe cap impact resistance – steel midsole• flexing – nail penetration – electrical resistance – hot ,• 8th week : Mid-Semester Examinations• cold insulation materials- steel toe caps- TPU- aluminium - nubuck, patent, suede leathers

11 th to 13 th Week	<ul style="list-style-type: none"> • Functions of safety footwear – protect from falling and flying objects – punctures – cutting hazards – electrical hazards – slips, trips and falls-fatigue – burns – extreme weather
14 th to 16 th Week Total hours: 60	<ul style="list-style-type: none"> • Different types of foot deformities – types of deformities which could be corrected using footwear – introduction to orthosis – types – types of arch supports – specialized in outsole – different types of safety footwear

Text Books:

1. Thomton, J.H., “Text book of footwear Manufacture”, National Trade Press Book Ltd., London, 1970.
2. Skoggard, I.A., “Modern Show Making – Lasting”, SATRA Publication, Sharpe, 1996
3. Miller R.G., “Manual of Shoe Making”, Clarks Ltd., London, 1

REFERENCES

1. Manuals from FDDI
2. International footwear journals
3. Manuals from CLRI