

THE GANDHIGRAM RURAL INSTITUTE – DEEMED TO BE UNIVERSITY

MINISTRY OF EDUCATION (SHIKSHA MANTRALAYA), GoI

ACCREDITED BY NAAC WITH ‘A’ GRADE (3rd Cycle)

GANDHIGRAM-624302, DINDIGUL DISTRICT, TAMIL NADU



B.VOC / B.VOC (Hons)

**FOOTWEAR AND ACCESSORIES DESIGN SYLLABUS
(UGC/ NSQF- NHEQF/NCrF/UCF & NEP 2020 version)**

(With effect from July 2024)

DEEN DAYAL UPADHYAY– KAUSHAL KENDRA

GANDHIGRAM- 624302

THE GANDHIGRAM RURAL INSTITUTE
(DEEMED TO BE UNIVERSITY)
GANDHIGRAM
DEEN DAYAL UPADHYAY-KAUSHAL KENDRA
Minutes of the DDU-KK- Board of Studies Meeting for
B.Voc.(FootwearAndAccessoriesDesign) held on Date: 26.06.2024, 10.00 am GRI.

AGENDA

Agenda1	Restructuring the Syllabus for B.Voc(Footwear and Accessories Design) from the year 2024-2025 onwards
Agenda2	Panel of Experts for the University–Level Skill Assessment
Agenda3	Change of Nomenclature
Agenda4	Eligibility Criteria for Admission for B.Voc (FAD), B.Voc-Hons-Footwear and Accessories Design
Agenda5	Equivalence (Amendment AICTE)
Agenda6	Eligibility for higher education for vertical mobility

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DEEN DAYAL UPADHYAY-KAUSHAL KENDRA
Minutes of the DDU-KK-Board of Studies Meeting for
B.Voc.(Footwear And Accessories Design) held on Date: 26.06.2024, 10.00am GRI.

The meeting of the Board of Studies in B.Voc and B.Voc (Hons) Footwear and Accessories Design was held on 26.06.2024 in GRI, Gandhigram at 10:00AM to deliberate on the prescribed agenda. The following members were attended the meeting. The meeting started with a silent prayer at 10.00 am.

1.	Dr.K.KrishnaRaj ,Head, Chief Scientist Shoe & product design development- CLRI, Adyar, Chennai-600020.	Member
2.	Dr.M.Aravendan, Professor, Department of Leather design,NIFT, Rajiv Gandhi salai,Taramani,Chennai- 113.	Member
3.	S.Ponsubbaiah,H.O.D.ILT, CPT campus,Rajiv Gandhi salai,Taramani,Chennai-113.	Special Invitee
4.	K.Dinesh,CenterIncharge, Footwear design and Development Institute, Chennai Campus.	Special Invitee
5.	Mr.V.Ramar, Asst.Professor, DDU-KK, GRI, Gandhigram. B.Voc(FAD)	Special Invitee (Internal)
6.	Dr.R.I.Sathya, Director, DDU-KK, Course Coordinator – B.Voc.(FAD) GRI, Gandhigram	Chairperson&Convener

Dr.M.Aravendan, Professor, Department of Leather design, NIFT, Rajiv Gandhi salai, Taramani, Chennai (Member), could not attend the meeting due to his pre-occupation.

Dr.R.I.Sathya, Professor and Director, DDU-KK,GRI welcomed the members, of B.Voc (FAD) and special invitee of the Board and she briefed the agenda. She explained the need for restructuring the Syllabus and alignment with NEP2020 for B.Voc (FAD).

The Board Deliberated on the Items on the Agenda and resolved as follows.

Agenda 1

Restructuring the Syllabus for B.Voc(Footwear and Accessories Design) from the year 2024- 2025 onwards

1. After detailed discussion, the board resolved to approve the changes in the syllabus, scheme of examination and eligibility criteria for B.Voc Footwear and Accessories Design programme(I to VI semester) as per the UGC B.Voc Guidelines, Sector Level NSQF/ NHEQF/ NCrF/UCF to be implemented from the academic year 2024-25 onwards.
(Enclosed in Annexure- I)
2. The board also approves the B.Voc (Hons) Footwear and Accessories Design – 4th year programme as per the guidelines of NEP. After detailed discussion, the Board resolved to approve the syllabus and curriculum of the VII and VIII semester B.Voc (Hons) – Footwear and Accessories Design with Two Specialization
Basket 1: Footwear manufacturing (Course Coded as 24FDVC47B1–B5)
Basket 2 :Leather Goods and Garment Manufacturing (Course Coded as 24FDVC47C1 – C5)

Agenda2

Panel of Experts for the University–Level Skill Assessment

1. The Board resolved to approve the panel of Experts for the University Level Skill Assessment for B.Voc – Footwear and Accessories Design. **(Enclosed in Annexure- I)**

Agenda3

Change of Nomenclature

- The Board resolved to change the nomenclature as “**B.Voc-Footwear and Fashion Accessories Design**”
- Further recommended to send the same to **UGC for Approval.**

Agenda 4

Eligibility Criteria for Admission for B.Voc (FAD), B.Voc –Hons- Footwear and Accessories Design

- Resolved to approve the eligibility criteria for admission into B.Voc (FAD), B.Voc Hons (FAD)

B.Voc-Footwear and Accessories Design	A pass in higher Secondary examination or its Equivalent
B.Voc Hons-Footwear and Accessories Design	B.Voc– Footwear and Accessories Design
Lateral Entry	10 th pass(X ^{std}) with three year Diploma in Leather based course/ Leather technology /Allied course in Leather may be admitted to the second year of B.Voc.(Footwear and Accessories Design).

Agenda 5
(Amendment AICTE)

- The board resolved to get the equivalence of B.Voc (Hons) is equivalence to BE/B.Tech.as per Ref: F.No.AICTE/P& AP/Misc/2022/dt 06.07.2022.

Agenda 6

Eligibility for higher education for vertical mobility

- The board resolved to approve and recommend implementing in GRI; Students with B.Voc Degree should be considered eligible for the Trans Disciplinary vertical mobility into such courses where the entry qualification is a bachelor Degree without specific requirement in a particular discipline.D.NO.F.2-/2014(CC/NVEQF)/Misc./dt03.08.2016.
- The board suggested and recommended B.Voc (Footwear and Accessories Design)to considered eligible for M.Sc Textiles and Fashion Design (B.Voc) / MS Footwear Science and Engineering (B.Voc Hons)

The Chair thanked all the members. The meeting concluded at 5.00PM

Board of Studies in B.Voc. (Footwear and Accessories Design)
Held On 26.06.2024

1.	Dr.K.Krishna Raj, Head, <i>Chief Scientist</i> Shoe & Product Design and Development centre, CLRI, Adyar, Chennai-600020.	Member	<i>K. Krishna</i>
2.	S.Ponsubbaiah, Head, ILT,CPT campus, Rajiv Gandhi salai, Taramani,Chennai-113.	Special Invitee	<i>S. Ponsubbaiah</i>
3.	K.Dinesh, Center Incharge, Footwear design and Development Institute, Chennai Campus.	Special Invitee	<i>K. Dinesh</i>
4.	Mr.V.Ramar, Asst.Professor, B.Voc(FAD) Gandhigram Rural Institute-DTBU, Gandhigram.	Special Invitee (Internal)	<i>V. Ramar</i>
5.	Dr.R.I.Sathya, Director- DDU-KK, Course Coordinator-B.Voc.(FAD) Gandhigram Rural Institute-DTBU, Gandhigram.	Convener & Chairperson	<i>R. I. Sathya</i> 26/06/2024

Scheme of Syllabus for B.Voc-Footwear and Accessories Design-2024

Award/ExitOption:Diploma in Footwear and Accessories Design

III SEMESTER

GEC	Major-10	24FDVC2301	Foot Anatomy and Solid Modelling	04	4	-	40	60	100
	Major-11	24FDVC2302	Machines and Maintenance	04	4	-	40	60	100
	Major-12	24FDVC2303	Business communication	04	4	-	40	60	100
				12	12	-	120	180	300
SDC	Major-13	24FDVC2304	Pre-Assembling Operations of Leather Products(p)	04	-	4	60	40	100
	Major-14	24FDVC2305	Stitching of Components for Leather Products (P)	04	-	4	60	40	100
	Major-15	24FDVC2306	Fashion Illustrations(P)	03	-	3	60	40	100
	Abilityenhancement course-3		Web Designing	03	1	2	60	40	100
	On the Job Training	24FDVC2307	Internship-III	04	-	4	50	-	50
Total				18	1	17	290	160	450

**Job Role: Production Controller, Line Supervisor, Machine Technician
(NHEQF/NSQF-5/NCrF/UCF-5)**

IV Semester

GEC	Major-16	24FDVC2401	Material Science	03	3	-	40	60	100
	Major-17	24FDVC2402	Costing of Leather Products	03	3	-	40	60	100
	Major-18	24FDVC2403	Principles of Merchandising and Marketing	03	3	-	40	60	100
	Major-19	24FDVC2404	Production and Operation Management	03	3	-	40	60	100
Total				12	12	-	160	240	400
SDC	Major-20	24FDVC2405	Fashion Footwear Production (P)	03	-	3	60	40	100
	Major-21	24FDVC2406	Designing and Pattern Making of Footwear-I(P)	04	-	4	60	40	100
	Major-22	24FDVC2407	Designing and Pattern Making of Leather Goods-I (P)	03	-	3	60	40	100
	Major-23	24FDVC2408	Designing and Pattern Making of Leather Garments -I (P)	04	-	4	60	40	100
	On the Job Training	24FDVC2409	Internship-IV	04	-	4	50	-	50
Total				18	-	18	290	160	450

**Job Role: CAD operator, CAD designer, Illustrator, Pattern Cutter, Line Manager, Quality Supervisor
(NHEQF/NSQF-5/NCrF/UCF-5)**

Award/Exit Option : Advance Diploma in Footwear and Accessories Design

V Semester									
GEC	Major-24	24FDVC3501	Material Management	04	4	-	40	60	100
	Major-25	24FDVC3502	Human Resource Management	04	4	-	40	60	100
	Major-26	24FDVC3503	Specialty and Non Leather Footwear	4	4	-	40	60	100
	Total			12	12	-	120	180	300
SDC	Major-27	24FDVC3504	Life Style Accessories Designing(P)	03	-	3	60	40	100
	Major-28	24FDVC3505	Designing and Pattern Making of Footwear-II (P)	04	-	4	60	40	100
	Major-29	24FDVC3506	Designing and Pattern Making of Leather Goods-II (P)	03	-	3	60	40	100
	Major-30	24FDVC3507	Designing and Pattern Making Of Leather Garments-II(P)	04	-	4	60	40	100
	On the Job Training	24FDVC3508	Internship-V	04	-	4	50	-	50
					18	-	18	290	160
JobRole:Retailer, Pattern Maker, Manual Footwear Designer, AccessoriesDesigner (NHEOF/NSOF- 5.5 /NCrF/UCF - 5.5)									

VI Semester									
GEC	Major– 31	24FDVC3601	Entrepreneurship Development	04	4		40	60	100
	Major– 32	24FDVC3602	Footwear Retailing	04	4	-	40	60	100
	Major– 33	24FDVC3603	Material Testing (P)	04	-	4	60	40	100
	Total			12	8	4	140	160	300
SDC	Major– 34	24FDVC3604	CAD for Footwear(P)	04	-	4	60	40	100
	Major– 35	24FDVC3605	CAD for Leather Goods and Garments(P)	04	-	4	60	40	100
	Major– 36	24FDVC3606	Portfolio(P)	04	-	4	60	40	100
	On the Job Training	24FDVC3607	Internship– VI cum Project	06	-	6	60	40	100
	Total			18	-	18	240	160	400
JobRole:Manager, Designer, Product Developer, BOM incharge, Entrepreneur (NHEQF/NSQF-6/NCrF/UCF-5.5)									
Award/ExitOption:B.Voc. Footwear and Accessories Design									

- **Basket-I (B- Footwear Manufacturing)**

VIII Semester									
GEC	Major-43	24FDVC4801	Product Portfolio Management	04	4	-	40	60	100
	Major-44	24FDVC48B1	Advanced Shoe Styling and Designing Using of CAD/CAM(P)	04	-	4	60	40	100
	Major-45	24FDVC48B2	Advanced Footwear Manufacturing(P)	04	-	4	60	40	100
Total				12	4	8	160	140	300
SDC	Major- 46	24FDVC4802	Finishing Techniques for Leather Products	03	3	-	40	60	100
	Major-47	24FDVC48B3	Professional Portfolio-Work Portfolio (P)	05	-	5	60	40	100
	On the Job Training	24FDVC48B4	Internship-VIII/ Dissertation	10	-	10	60	40	100
	Total			18	3	15	160	140	300
JobRole:Product Developer, Research Analyst, Entrepreneur, Plant Manager, Enterprise Developer (NHEQF/NSQF-6.5/7/NCrF/UCF-6)									

Award/ExitOption:B.Voc(Hons) in Footwear and Accessories Design

• **Basket-II (C-Leather Goods and Garments Manufacturing)**

VII Semester									
GEC	Major-37	24FDVC4701	Research Methodology	04	4	-	40	60	100
	Major-38	24FDVC4702	Enterprise development Programme	04	4	-	40	60	100
	Major-39	24FDVC47C1	Modern Goods and Garments Making	04	4	-	40	60	100
	Total			12	12	-	120	180	300
SDC	Major- 40	24FDVC47C2	Leather Goods and Garments Manufacturing(P)	04	-	4	60	40	100
	Major- 41	24FDVC47C3	Products Development in Leather Goods(P)	05	-	5	60	40	100
	Major- 42	24FDVC47C4	Products Development in Leather Garments(P)	05	-	5	60	40	100
	On the Job Training	24FDVC47C5	Internship-VII	04	-	04	50	-	50
	Total			18	-	18	230	120	350
JobRole:Product Developer, Research Analyst, Merchandiser (NHEQF/NSQF-6.5/NCrF/UCF-6)									

VIII Semester									
GEC	Major-43	24FDVC4801	Product Portfolio Management	04	4	-	40	60	100
	Major-44	24FDVC48C1	Advanced Accessories Designing Using of CAD/CAM (P)	04	-	4	60	40	100
	Major-45	24FDVC48C2	Advanced Leather Goods and Garments Manufacturing(P)	04	-	4	60	40	100
	Total			12	4	8	160	140	300
SDC	Major- 46	24FDVC4802	Finishing Techniques for Leather Products	03	3	-	40	60	100
	Major-47	24FDVC48C3	Professional Portfolio-Work Portfolio (P)	05	-	5	60	40	100
	On the Job Training	24FDVC48C4	Internship-VIII/ Dissertation	10	-	10	60	40	100
	Total			18	3	15	160	140	300
JobRole:Product Developer, Research Analyst, Entrepreneur, PlantManager (NHEQF/NSQF- 6.5/7 /NCrF/UCF – 6)									

Award/ExitOption:B.Voc(Hons) in Footwear and Accessories Design

MULTI DISCIPLINARY FOR ARTS AND SCIENCE									
SDC	I Semester								
	Multi Disciplinary-I	24FDVM1101	Life Style Accessories Designing	03	-	3	40	60	100
	Multi Disciplinary-II	24FDVM1102	Leather Footwear Making	03	-	3	40	60	100
	II Semester								
	Multi Disciplinary-III	24FDVM1201	Open Footwear Making	03	-	3	40	60	100
	Multi Disciplinary-IV	24FDVM1202	Leather Goods Making	03	-	3	40	60	100
	III Semester								
	Multi Disciplinary-V	24FDVM2301	CAD for Footwear	03	-	3	40	60	100
	Multi Disciplinary-VI	24FDVM2302	Leather Garments Making	03	-	3	40	60	100

I SEMESTER
MAJOR COMPONENTS-1
INTRODUCTION TO LEATHER PROCESSING AND NON LEATHER MATERIALS
(CourseCode:24FDVC1101)

Credits:3+0

(CFA=40+ESE=60)

Objectives:

- To make the students understand about existing Leather Processing.
- To enable the student's to gain knowledge on non leather materials and various processes involved in Leather Processing.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in Preservations techniques of rawhide 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, types of non leather materials.

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 –deliming - bating–pickling–depickling 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 Finishing- Objectives of finishing, classifications and types of finishing, finishing machineries, finishing process. Different types of leathers and their properties, uses.

UNIT-IV

Rubber – natural – vulcanised – composition – Thermo plastic (TR), Poly vinyl chloride (PVC), Poly Urethane, Ethyl Vinyl Acetate (E.V.A.), Abrasives, Solvents, Waxes, Inks, Fabrics – natural and synthetic, Polychloreprene, Thermo Polyurethane, Stiffeners – Toe puffs, Heels, Paper and Cardboard.

UNIT-V

Fundamentals of polymers: Chemistry and Classification of Polymers – Properties of Thermo plastics – Properties of Thermosetting Plastics – Applications – Merits and Disadvantages. Introduction to non leather, Fabrics – types of fabrics, Origin and classifications of fabrics, fabrics making methods, properties and strength of different fabrics. Role of fabric in footwear manufacturing. Difference between woven and knitted fabrics. More sustainable textiles and synthetics for footwear.

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–deliming-bating–pickling–depickling and degreasing
7 th to 10 th Week	<ul style="list-style-type: none"> 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 Finishing- Objectives of finishing, classifications and types of finishing, finishing machineries, finishing process. Different types of leathers and their properties, uses. 8th week: Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> Rubber – natural – vulcanised – composition – Thermo plastic (TR) Poly vinyl chloride (PVC), Poly Urethane, Ethyl Vinyl Acetate (E.V.A.), Abrasives, Solvents, Waxes, Inks, Fabrics – natural and synthetic, Polychloreprene, Thermo Polyurethane, Stiffeners – Toe puffs, Heels, Paper and Cardboard.
14 th to 15 th Week	<ul style="list-style-type: none"> Fundamentals of polymers: Chemistry and Classification of Polymers – Properties of Thermo plastics – Properties of Thermo setting Plastics – Applications – Merits and Disadvantages. Introduction to non leather, Fabrics – types of fabrics, Origin and classifications of fabrics, fabrics making methods, properties and strength of different fabrics. Role of fabric in footwear manufacturing. Difference between woven and knitted fabrics. More sustainable textiles and synthetics for footwear.
Total: 45 hrs	

TEXT BOOKS:

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

REFERENCES

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

MAJOR COMPONENTS -2
OCCUPATIONAL HEALTH AND SAFETY FOR FOOTWEAR AND ACCESSORIES
INDUSTRIES

(Course Code: 24FDVC1102)

Credits: 4+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 (4 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: 60 hrs	<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. Blak in industrial safety, 3rd Edn. Prentice Hall inc., New Jersey, 1963.

REFERENCES

1. EN- 344 Standards.

(MULTI/INTER) DISCIPLINARY – I
SKETCHING AND RENDERING–I(P)
(CourseCode: 24FDVI1103)

Credits:0+4

(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

Identify basic design styles Rendering Techniques-Pencil, Staedler and Color Pencil, Charcoal.

UNIT-II

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-III

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

UNITIV

Fabric rendering of different varieties of fabrics, Prints, Woven's, Knit, Wool, Fur, Lustrous,Dark, Sheer, lace, Embellishment

UNITV

Drawing Footwear and Accessories on different surfaces Dimensional drawing of footwear and accessories – drawing using dimensions and measurements Dimensional drawing of footwear and accessories – drawing different perspectives

PRACTICALSCHEDULE

No.ofweek (4 hrs.per week)	Topicscovered
1 st to 3 rd Week	<ul style="list-style-type: none"> Identify basic design styles Rendering Techniques - Pencil, Steadler and Color Pencil, Charcoal
4 th to 6 th Week	<ul style="list-style-type: none"> Renderingtechniques-spraying,brushing,usetemplatetodrawsketches performrendering,obtainingandobservingdrawingforrendering operation (30 varieties of rendering using these elements)
7 th to 10 th Week	<ul style="list-style-type: none"> Rendering mediums –water colour, poster colour use template to draw sketches, perform rendering, obtain and observing drawing for rendering (30 varieties of sample use these elements) 8thweek:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> Fabricrenderingofdifferentvarietiesoffabrics,Prints,Woven“s,Knit, Wool,Fur, Lustrous,Dark,Sheer,lace,Embellishment
14 th to15 th Week Total:60hrs	<ul style="list-style-type: none"> Drawing Footwear and Accessories on different surfaces Dimensional drawing of footwear and accessories – drawing using dimensions and measurements Dimensional drawing off ootwear and accessories– Drawing different perspectives

TEXT BOOKS:

1. Mordern Fashion illustration-pacoAsensio,ISBN978-84-96805-31-6
2. Fashion sketch book-Binaabling
3. Hideaki Chijiwa, Colourharmony– “A Guide to creative colour Combination”.

REFERENCES

1. HelInGoworek,“Drawing Courseastep by step Guide”Black well Publications.
2. HW.Janson&AnthonyJanson,“History of art”thewesternradition,revised6th edition, Upper saddle rivet
3. RoyC.Craven,“Indian Art”,Thames& „Hudson

VALUE ADDED COURSE - 2
ELEMENTS AND PRINCIPLES OF DESIGNS (P)
(CourseCode: 24FDVV1104)

Credits:0+5

(CFA=60+ESE=40)

Objectives:

- To make the students understand about elements and principles 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

Fashion – Definition, Classification, terminologies, cycle, Factors, Fashion psychology and forecasting.

UNIT II

Elements and Principles of Design – Definition, Types, Elements- Line, Shape, Colour, Form, Texture Principles- Balance, Harmony, Proportion, Rhythm and Emphasis. Application of Elements and Principles in Footwear, Goods and Garment design.

UNIT III

Color-definition; basics of color -hue, value, intensity; Color theory-light and pigment; Munsell color system; Color schemes - monochromatic, analogous, complementary, split complementary, triad; warm and cool colors; psychological effects of color; color selection of material based on color for person and season.

UNIT IV

Figure theory and analysis – 8 Head theory, 10 Head theory, Figure proportions for men, women and children. Trimmings – Neckline, Collars, Sleeves, Cuff, Pocket and Yokes. Garment Styling – Skirts, Trousers, Tops, Jackets and Coats.

UNIT V

Figure Irregularities – Becoming and unbecoming for the figure types – heavy figure, thin, slender, narrow and broad shoulder, small face, prominent chin and jaw, thick arm and prominent forehead

PRACTICALSCHEDULE

No. of week (5hrs.perweek)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Fashion–Definition,Classification,terminologies,cycle,Factors, Fashionpsychologyandforecasting.
4 th to 6 th Week	<ul style="list-style-type: none"> Elements and Principles of Design – Definition, Types, Elements- Line, Shape, Colour, Form, Texture Principles- Balance, Harmony, Propostion,RhythmmandEmphasis.ApplicationofElementsand PrinciplesinFootwear,GoodsandGarmentdesign.
7 th to 10 th Week	<ul style="list-style-type: none"> Color-definition;basicsofcolor-hue,value,intensity;Colortheory - light and pigment; Munsell color system; Color schemes - monochromatic, analogous, complementary, split complementary, triad; warm and cool colors; psychological effects of color; color selection of material based on color for person and season. 8thweek:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> Figure theory and analysis – 8 Head theory, 10 Head theory, and Figure proportions for men, women and children. Trimmings–Neckline, Collars, Sleeves, Cuff, Pocket and Yokes. GarmentStyling–Skirts,Trousers,Tops,JacketsandCoats
14 th to15 th Week Total:75 hours	<ul style="list-style-type: none"> FigureIrregularities–Becomingandunbecomingforthefiguretypes – heavy figure, thin, slender, narrow and broad shoulder, small face, prominent chin and jaw, thick arm and prominent forehead

TEXT BOOKS:

1. Accessoriesoptions:Shrugsscaxiesstoiles
2. BeadFantasies2 –Morebeautifuleasytomake8ewellerTakakoSanejima
3. Condexfashion book-vol-I& Vol-II

REFERENCE:

1. Piper,Davd: “TheJoyof Art”, ,–“MitchellBeazleyPublishers, 1984; 1984.
2. Elementsoffashionand appareldesignG.J.Sumathi
3. Elementsoffashionand appareldesignSumathi81-224-1371-4
4. EncyclopediaoofdressmakingRaul Jewel

SKILL ENHANCEMENT COURSE-I
PRE-TRAINING OPERATION IN CUTTING AND PRE-CLOSING (P)
(CourseCode: 24FDVS1105)

Credits:0+5

(CFA=60+ESE=40)

Objectives:

- To make the students understand about Pretraining Operation in Cutting and Pre Closing.
- To enable the students to gain knowledge on various Pretraining Operations –Cutting, skiving ,attaching and folding etc.,

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.

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,
- Handling and practicing of sewing machine
- Handling and practicing of skiving machine

UNIT-IV

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

UNIT-V

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

PRACTICALSCHEDULE

No.ofweek (5 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• 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 bottomstock components
7 th to 10 th Week	<ul style="list-style-type: none">• Handling and practicing of splitting machine, skiving machine• 8thweek: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 to15 th Week Total:75 hours	<ul style="list-style-type: none">• Handling and practicingof seam press machine and various seam preparations,edge treat ment 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., "FootwearMaterialsandProcessTechnology", N.Z.Leather&Shoe Research Association, New Zealand, 1982.
3. Comprehensive Footwear TechnologyByS. N Ganguly

REFERENCES

1. Manualsfrom NIMIPublications
2. ManualsfromFDDI
3. Manualsfrom CLRIPublications
4. ManualofShoeMakingClarksLtd

**ON THE JOB TRAINING
INTERNSHIP-I
(Coursecode: 24FDVE1106)**

Credits:0+4

(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 or middle or End of the 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.

II SEMESTER
MAJOR COMPONENTS – 3
INTRODUCTION TO LEATHER PRODUCTS MANUFACTURING
(CourseCode: 24FDVC1201)

Credits:3+0

(CFA=40+ESE=60)

Objectives:

- To make the students understand about leather products manufacturing.
- To enable the students to gain knowledge on various process –Clicking, Closing and constructions

Specific Learning Outcome:

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

UNIT-I

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. 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

UNIT-II

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-III

Sewing definition, tools used in closing room. Types of sewing machines (flat bed, post bed, cylinderbed)-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-IV

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-V

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

LECTURE SCHEDULE

No. of week (3 hrs. per week)	Topics covered
1 st to 3 rd 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. 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
4 th to 6 th 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.
7 th to 10 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.
11 th to 13 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
14 th to 15 th Week Total: 45 hrs	<ul style="list-style-type: none"> Lasting - principles and methods of lasting for different methods of constructions. Prelasting-pre-forming-insole attaching-back part moulding-moisture conditioning-gauging marking-bottom roughing and scouring

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

VALUE ADDED COURSE-3
ENVIRONMENTAL SCIENCE
(CourseCode: 24FDVV1202)

Credits:4+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 Ecosystem and its functions.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in solid waste management's, 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 (4 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: 60 hrs	<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, Clarendon Press 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, Clarendon Press Oxford (TB).

(MULTI/INTER) DISCIPLINARY – 2
SKETCHING AND RENDERING–II(P)
(CourseCode: 24FDVI1203)

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

Rendering the children footwear design for the following techniques-spraying, brushing, use template to draw sketches perform rendering, obtaining and observing drawing for rendering operation (10 varieties of rendering using these elements)

UNIT-II

Rendering the women footwear design for the following medium –water colour, poster colour use template to draw sketches, perform rendering, obtain and observing drawing for rendering (10 varieties of sample use these elements)

UNIT-III

Rendering the men footwear design for the following medium – acrylic colour, oil colour and colour pastel use template to draw sketches, perform rendering, obtain and observing drawing for rendering (10 varieties of sample use these elements)

UNIT-IV

Photo analysis-development of different jackets on croquis using different medium for Kid s, Male and Female (10 varieties of sample)

UNIT-V

Rendering the following leather accessories using different techniques and medium – Hand Bag, Purse, Pouch, Wallet, Belt, Key chains, Bracelets, Ear rings (10 varieties of sample)

PRACTICALSCHEDULE

No.of week (4hrs.perweek)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Rendering the children footwear designfor the following techniques-spraying, brushing, use template to draw sketches perform rendering, obtaining and observing drawing for rendering operation(10varieties of rendering using these elements)
4 th to 6 th Week	<ul style="list-style-type: none"> Rendering the women footwear design for the followingmedium – water colour, poster colour use template to draw sketches,perform rendering, obtain and observing drawing for rendering (10 varietiesofsampluse these elements)
7 th to 10 th Week	<ul style="list-style-type: none"> Rendering the men footwear designfor the followingmedium – acrylic colour, oil colourand colour pastel use template to draw sketches, perform rendering, obtain and observing drawing for rendering (10 varieties of sample use these elements) 8thweek:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> Photo analysis- development of different jackets on croquis using different medium for Kids ,Male and Female (10 varieties of sample)
14 th to 15 th Week Total:60 hours	<ul style="list-style-type: none"> Rendering the following leather accessories using different techniques and medium–HandBag, Purse, Pouch, Wallet, Belt, Keychains, Bracelets, Earrings(10varieties of sample)

TEXT BOOK:

1. Debra Kauffman Yaun, William Powell , Ken Goldman , Walter Foster , Art of Drawing People: Discover simple techniques for drawing a variety of figures and portraits, Reprint, 2012, Walter Foster Pub, USA
2. Liron Yanconsky, How to sketch: A Beginner's Guide to Sketching Techniques, IncludingStep by Step Exercises, Tips and Tricks, 1st edition, 2014, Create Space Independent Publishing Platform, US
3. Zeshu Takamura, Fashion Illustration Techniques: A Super Reference Book for Beginners, 2012, 1st edition, Rockport Publishers, USA

REFERENCE:

1. AnnaKiper,FashionIllustrationInspirationandTechnique,2016,1stedition,David& Charles Publisher, UK
2. BillDonovan,AdvancedFashionDrawing:LifestyleIllustration,2010,1stedition, Laurence King Publishing, UK
3. Estel Vilaseca, Essential Fashion Illustration: Color and Medium, 2011, reprint, Rockport Publishers, USA.

MAJOR COMPONENTS – 4
CUTTING TECHNIQUES FOR LEATHER PRODUCTS(P)
(CourseCode: 24FDVC1204)

Credits:0+5

(CFA=60+ESE=40)

Objectives:

- To enable the students to learn the Cutting of leather products materials
- To make the students understand the cutting process of various 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, in socks and non leather materials. Quality control.

UNIT-I

Review of general qualities of
leather Layout preparations in
hide/skin Layout preparation in side
Layout preparation for Synthetic Material

UNIT-II

Introduction to cutting knives and its uses,
Various Hand cutting tools & their handling & maintenance,
Different types of Hand cutting techniques
Calculation of cutting allowance by russ and small method

UNIT-III

Cutting techniques of upper components
Cutting techniques of lining components
Cutting techniques of insocks

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 (5 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Review of general qualities of leather• Layout preparations in hide/skin• Layout preparation in side• Layout preparation for Synthetic Material
4 th to 6 th Week	<ul style="list-style-type: none">• Introduction to cutting knives and its uses,• Various Hand cutting tools &their handling & maintenance,• Different types of Hand cutting techniques• Calculation of cutting allowance byruss and small method
7 th to 10 th Week	<ul style="list-style-type: none">• Cutting techniques of upper components• Cutting techniques of lining components• Cutting techniques of insocks• 8thweek:Mid-Semester Examinations
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:75hrs	<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,HuthigBuchVerlag, Heidelberg, 1988.
2. Manual of Shoe Making–ClarksLtd.
3. Text book of footwear manufacture byj.h Thornton.

REFERENCES

1. Swam Siddha Manual byFDDI.
2. Manuals from NIMI Publications
3. Manuals from SATRA publications

SKILL ENHANCEMENT COURSE-2
PRE-TRAINING OPERATIONS IN CLOSING AND LASTING (P)
(CourseCode: 24FDVS1205)

Credits:0+5

(CFA=60+ESE=40)

Objectives:

- To make the students understand about Pretraining Operation in stitching and lasting.
- To enable the students to gain knowledge on types of stitching and various lasting methods.

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 of Post Bed Single/double Needle sewing Machine, Cylinder bed and Flat bed Sewing Machine.
- Needle fixing and replacing of Post Bed Single/double Needle sewing Machine, Cylinder bed and Flat bed Sewing Machine.
- Bobbin fixing and replacing and winding of Post Bed Single/double Needle sewing Machine, Cylinder bed and Flat bed Sewing Machine.
- Stitching practice with stitching card (Paper exercise: 1 to 10)

UNIT-II

- Machines used in closing Room,
- Machine parts & functions,
- Work station & bench layout,
- Good working habits
- Stitching practice with synthetic materials
- Stitching practice with leather materials
- Safety precautions in closing room

UNIT-III

- Introduction to Automatic Machines in Closing
- Needle parts and function, Classification of needles
- Relations of needle and thread
- Selection of a needle and Needle policy
- Classification of threads
- Construction of threads
- Size, system and consumption of threads
- Identification of threads
- Physical properties

UNIT-IV

- Introduction to Drafting/ Hand Lasting
- Principles of Hand lasting
- Bare last tacking
- Insole attaching
- Vamp lasting (leather vamp)
- Vamp lasting(leather vamp and lining)
- Vamp lasting(leathervamp,liningand stiffener)

UNIT-V

- Toe lasting
- Seatlasting
- Side lasting
- Safety precautions in lasting room

PRACTICAL SCHEDULE

No.of week (5hrs.per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Threading of Post Bed Single/double Needle sewing Machine, Cylander bed and Flat bed Sewing Machine.• Needle fixing and replacing of Post Bed Single/double Needle sewing Machine,Cylender bed and Flat bed Sewing Machine.• Bobbin fixing and replacing and winding of Post Bed Single/double Needle sewing Machine, Cylander bed and Flat bed Sewing Machine.• Stitching practice with stitching card(Paper exercise:1to 10)
4 th to 6 th Week	<ul style="list-style-type: none">• Machines used in closing Room,• Machine parts & functions,• Work station &bench layout,• Good working habits• Stitching practice with synthetic materials• Stitching practice with leather materials• Safety precautions in closing room
7 th to 10 th Week	<ul style="list-style-type: none">• Introduction to Automatic Machines in Closing• Needle parts and function,Classification of needles• Relations of needle and thread,,• Selection of a needle and Needle policy• Classification of threads• Construction of threads• Size, system and consumption of threads• Identification of threads• Physical properties• 8thweek:Mid-Semester Examinations

11 th to 13 th Week	<ul style="list-style-type: none"> • Introduction to Drafting/ Hand Lasting • Principles of Hand Lasting • Bare last tacking • Insole attaching • Vamp lasting(leather vamp) • Vamp lasting(leather vamp and lining) • Vamp lasting(leather vamp, lining and stiffener)
14 th to 15 th Week Total: 75 hours	<ul style="list-style-type: none"> • Toe lasting • Seat lasting • Side lasting • Safety precautions in lasting room

TEXT BOOKS:

1. Thornton, J.H., "Textbook 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

ON THE JOB TRAINING
INTERNSHIP –II
(Coursecode:24FDVE1206)

Credits:0+4

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.

FieldVisit:

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 or middle or End of the 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.

III SEMESTER
MAJOR COMPONENTS-05
FOOT ANATOMY AND SOLID MODELLING
(CourseCode: 24FDVC2301)

Credits:4+0

(CFA=40+ESE=60)

Objectives:

- To provide comprehensive knowledge in 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 footwear.

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.Introduction to Indian Sizing System

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 pes cavus, 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-biomechanics of walking. Types of forces-friction, movements. 8th week: Mid-Semester Examinations Gait 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. Introduction to Indian Sizing System
14 th to 15 th Week Total: 60 hours	<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., "Textbook of Anatomy", Oxford IBH London 1967.
- Morton, D.J., "The Human Foot", Hafner Publishing Co., New York, London, 1964.
- Thornton, J.H., "Textbook 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.

MAJOR COMPONENTS - 06
MACHINES AND MAINTENANCE
(Course Code: 24FDVC2302)

Credits: 4+0

(CFA=40+ESE=60)

Objectives:

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

Specific Learning Outcome:

After learning this paper the students will gain knowledge in different types of mechanics in machines, electronic, magneto electric, photo cell and control safety systems, clicking room, closing room machines, transport system, 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 in machine. Electronic, magneto electric, 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, basic working mechanism of machines.

UNIT-III:

Skiving machine, splitting machines, Embossing machines, Fusing machines, Hammering machines, Screen printing, basic working mechanism of Pre-Closing machine.

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, takt time, in closing room. Broken Needle policy, Metal Detector in closing room. Lighting conditions for each machine's operations, and decibel levels in each operations.

LECTURE SCHEDULE

No.ofweek (4hrs.perweek)	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 ,magneto electric,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,basic working mechanism of machines.
7 th to 10 th Week	<ul style="list-style-type: none"> Skivingmachine,splittingmachines,Embossingmachines,Fusing machines, Hammering machines, Screen printing, basic working mechanismof Pre-Closing machine. 8thweek:Mid-Semester Examinations
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	<ul style="list-style-type: none"> Machine Arrangements in , cycletime,takttime,in closing room. Broken Needle policy, Metal Detector in closing room. Lighting conditions for each machines operations,and decibel levels in each operations.
Total: 60 hrs	

TEXT BOOKS:

1. Shigley,J.E.andVicker,J.J.,“Theory of Machines and mechanisms”,McGrawHill,1995.
2. Paul,B.,“Kinematics and Dynamics of Planar Machinery”,PrenticeHall,1979.
3. Manual of shoe making–clarks ltd

REFERENCES

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

SKILL ENHANCEMENT COURSE-3

BUSINESS COMMUNICATION

(CourseCode: 24FDVS2303)

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 layout 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-tele conferences-press conference-demonstration-radio recording-meeting-oral report) - The art of listening-principles of good listening

LECTURE SCHEDULE

No.ofweek (4hrs.perweek)	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 layout of business letters-kinds of business letters- 8thweek: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	<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)–
Total:60hours	<ul style="list-style-type: none"> Theart of listening-principles of good listening

TEXT BOOKS:

1. M.K.Sehgal&V.Khetrapal-BusinessCommunication (Excel books)
2. Tayler Shinley–Communication for Business (Pearson Education,4thEdition)
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. TaylerShinley–Communication for Business(PearsonEducation, 4thEdition)

MAJOR COMPONENTS -07
PRE-ASSEMBLING OPERATIONS OF LEATHER PRODUCTS(P)
(CourseCode: 24FDVC2304)

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 product 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 courtshoe 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 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 handbag
- 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 of components for leather of goods-clutchpurse

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.ofweek(4 hrs.perweek)	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 handbag • Making of components for leather goods-belt • 8thweek: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 of 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 byS.N.Ganguly

REFERENCES:

- 1.Swamsiddha Manual by FDDI
- 2.Manuals from NIMI Publications
- 3.Manuals from CLRI

MAJOR COMPONENTS – 07
STITCHING OF COMPONENTS FOR LEATHER PRODUCTS(P)
(CourseCode: 24FDVC2305)

Credits:0+4

(CFA=60+ESE=40)

Objectives:

- To enable the student to learn the Stitching operations for leather products.
- To make the students understand Stitching operations for leather products like footwear, 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.ofweek (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• 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• 8thweek: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 to15 th We ek 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 FootwearTechnology

REFERENCES

1. Swyamsiddha Manual by FDDI
2. Manuals from NIM IPublications
3. Manuals from CLRI

(MULTI/INTER)DISCIPLINARY-3
FASHION ILLUSTRATION (P)
(CourseCode:24FDVI2306)

Credits:0+3

(CFA=60+ESE= 40)

Objectives:

To enable the students to make a different types of fashion in the illustrate form
To make the students to understand their structure in illustration

Specific Outcome

- Determine the significance of illustration for visual combination. Expertise in fleshing out figures from croquis. Illustrate the features of the face and body. Design accessories for both male and female

Illustrate the following features

- Handling different types of pencils
- Practicing dot,line,shape
- Practicing shading techniques
- Practicing Light and Dark shadows
- Practicing stick figures and postures
- Practicing with geometric shapes for human figure drawing and postures
- Practicing with bodylines and postures
- Structuring the human figure using geometric shapes
- Understanding human anatomy and practicing 8head, 10 head, 12 head theories
- Rendering techniques-Texturing of fabrics, objects
- Practicing face,eye and eyebrow,nose, mouth, ear, lips, hands, arms,feet,legs,hairstyles
- Practicing different accessories for men and women-footwear, hats, bags, goggle, jewellery

PRACTICALSCHEDULE

No.ofweek (3 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Handling different types of pencils• Practicing dot,line,shape• Practicing shading techniques
4 th to 6 th Week	<ul style="list-style-type: none">• Practicing light and dark shadows• Practicing stick figures and postures

	<ul style="list-style-type: none"> • Practicing with geometric shapes for human figure drawing and postures • Practicing with bodylines and postures
7 th to 10 th Week	<ul style="list-style-type: none"> • Practicing with geometric shapes for human figure drawing and postures • Practicing with bodylines and postures • Structuring the human figure using geometric shapes • 8th week: Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Understanding human anatomy and practicing 8head, 10head, 12 head theories • Rendering techniques-Texturing of fabrics, objects
14 th to 15 th Week Total: 45 hours	<ul style="list-style-type: none"> • Practicing face, eye and eyebrow, nose, mouth, ear, lips, hands, arms, feet, legs, hairstyles • Practicing different accessories for men and women- footwear, hats, bags, goggles, jewellery

TEXT BOOKS:

1. Comdex Fashion Design-Vol-1 Fashion Concepts
2. Advanced Fashion Sketch Book, Bina Abbing, OM Book Service, India (2007)
3. Basic fashion design Styling 978-2-940411-39-9
4. Sapna Sarkas "Fashion and sketch book" 978-93-81031-39-1
5. Harold Carr "Fashion design and product development"
6. Fashion Design illustration Children Ireland
7. Verekes "Fashion designers handbook for adobe illustration Centers" 978-1-4051-6055-1
8. Anmol Roy "Fashion designing and technologies" 978-81-8411-304-4
9. Figure Drawing for Fashion, Isao Yajima, Graphic-Sha; First Edition (1987)
10. Fashion Art for the Fashion Industry, Rita Gersten, Fairchild Books (1989)

REFERENCES:

1. Fashion Illustration Flat drawing
2. Eugeniakim "Saturday night" 0-307-33794-4
3. Tatham Seamas, "fashion design drawing course" 978-0-7641-2473-0
4. Fashion Drawing— The Basic Principles, Anne Allen and Julian Seaman, Anova Books.
5. Fashion illustration and Presentation, Manmeet Sodhia, Kalyani Publishers.
6. Fashion Source Book, Kathryn Mckelvey, Blackwell Science
7. Encyclopedia of fashion details, Patrick John Ireland, Batsford.
8. Fashion Illustration, Colin Barnes, Little Brown and Co. (UK) (April 1995).
9. Snap Fashion Sketch Book, Bill Glazer, Prentice Hall; 2nd edition (2007).

ON THE JOB TRAINING

INTERNSHIP – III

(Coursecode:24FDVE2307)

Credits:0+4

(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

FieldVisit:

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 or middle or End of the 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 - IV
MAJOR COMPONENTS-09
MATERIAL SCIENCE
(CourseCode: 24FDVC2401)

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, grinders, 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 insole Sole-Types of soling materials-PVC, PU, TPR, rubber, EVA, TPU, TPE, & nitrile 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 –grinders- metallic- non metallic grinders- tack -nail & rivets, wires-eyelet, buckles, buttons, fastness materials-characteristics, requirements and properties of grinders

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

LECTURE SCHEDULE

No. of week (3hrs. 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 insole Sole-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 ExaminationsProperties 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- nonmetallic grinderies-tack -nail&rivets, wires-eyelet, buckles, buttons, fastness materials- characteristics, requirements and properties of grinderiesAdhesives: classification of adhesives-rubber latex-natural rubber solution -neoprene -poly urethane-hot melt adhesives-principle of adhesion

TEXT BOOKS:

1. Thornton, J.H., "Textbook 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

MAJOR COMPONENTS – 10
COSTING OF LEATHER PRODUCTS
(CourseCode: 24FDVC2402)

Credits:3+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
- 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
- Calculating total product cost
- Calculating total materials costs and labour cost
- Calculating total job cost including overhead and mark-up percentages
- Final cost is calculation
- 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 Moccasin, 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 labour 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 calculation
- 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 Moccasin 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 labour 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 calculation
- 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 detail so of job requirements and specifications
- Determination and estimation of types and quantities of materials including accessories required for work
- Identification and estimation of labour 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 calculation
- 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
- Identification and estimation of labour 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 calculation
- 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 (3hrs.perweek)	Topics covered
1 st to 3 rd Week	Identify cost items of Derby, <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 labour 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 calculation <ul style="list-style-type: none"> • 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.
4 th to 6 th Week	Identify cost items of Oxford, <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 labour 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 calculation • 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.

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 labour 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 calculation • 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 labour 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 calculation • 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. <p>• 8th week: Mid-Semester Examinations</p>
14 th to 16 th Week Total: 45 hours	<ul style="list-style-type: none"> • Identify cost items of Wallet, purse, ladies bag, 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 • Identification and estimation of labour requirements to perform required work • Estimation of time requirements to perform the work • Developing and recording details of product to be produced

	<ul style="list-style-type: none"> • Calculate total product cost • Calculating total materials costs and labour cost • Calculating total job cost including overheads and mark-up percentages • Final cost is calculation • 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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TEXT BOOKS:

1. Text book of footwear manufacture by J.H. Thornton
2. Manual of shoemaking – Clarks Ltd
3. Comprehensive Footwear Technology by S.N. Ganguly

REFERENCE:

1. CLRI – publications
2. NIMI Publications
3. Manuals from NIMI Publications
4. Manuals from CLRI

ABILITY ENHANCEMENT COURSE – 4
PRINCIPLES OF MERCHANDISING AND MARKETING
(CourseCode: 24FDVA2403)

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 processes.

UNIT-III

Time management – production scheduling – route card format – accessories follow up – various process follow up – pattern approval – size set approval – procedures – order execution 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 (3hrs. 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. MS. Shesadhri apparel marketing and merchandising ms publication Bangalore.
2. Grace E. Kunz merchandising theory, principle and practices Fair child publication.
3. Timsackson and david shaco fashion buying & merchandising management.

REFERENCES:

1. Philip Kotler, marketing management , prentice hall inc 1996..
2. Rutheeglock and gracei. Kunz, "apparel manufacturing" prentice hall inc 2005.

MAJOR COMPONENTS – 11
PRODUCTION AND OPERATIONS MANAGEMENT
(CourseCode: 24FDVC2404)

Credits:3+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.

UNITI: MODELLING AND OPERATIONS

Transformation process model: Inputs, process and outputs; Classification of operations; Responsibilities of Operations Manager; New Product Development, Selection and Design of Product / Services.

UNITII: PROCESS FLOW STRUCTURE

Process types in manufacturing: project, jobbing, batch, line, mass, continuous; Process types in services: professional services, services shops, mass services; Plant location; Layout planning.

UNITIII: PRODUCTION ,PLANNING AND CONTROL

Production Planning & Control: Production planning techniques for various process choices, techniques of production control, aggregate planning techniques.

UNITIV: QUALITY MANAGEMENT

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, statistical process control chart; Quality assurance; Total quality management (TQM) model; Service quality, concept of Six Sigma and its application. 7 QC Tools and Statistical Process Control.

UNITV: PRODUCTIVITY IMPROVEMENT TECHNIQUES

Productivity Improvement Techniques: Work study; Method study; Work measurement: time study: stop watch time study; Work sampling. Maintenance: maintenance policies for facilities and equipment; Time of failure; Preventive versus breakdown maintenance; Procedure for maintenance, total productive maintenance (TPM)

LECTURE SCHEDULE

No. of week (3hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Transformation process model: Inputs, process and outputs; Classification of operations; Responsibilities of Operations Manager; New Product Development, Selection and Design of Product / Services
4 th to 6 th Week	<ul style="list-style-type: none"> Process types in manufacturing: project, jobbing, batch, line, mass, continuous; Process types in services: professional services, services shops, mass services; Plant location; Layout planning.
7 th to 10 th Week	<ul style="list-style-type: none"> Production Planning & Control: Production planning techniques for various process choices, techniques of production control, aggregate planning techniques, 8th week: Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> 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, statistical process control chart; Quality assurance; Total quality management (TQM) model; Service quality, concept of Six Sigma and its application. 7 QC Tools and Statistical Process Control.
14 th to 15 th Week	<ul style="list-style-type: none"> Productivity Improvement Techniques: Workstudy; Method study; Work measurement: time study; stop watch time study; Work sampling. Maintenance: maintenance policies for facilities and equipment; Time of failure; Preventive versus breakdown maintenance; Procedure for maintenance, total productive maintenance (TPM)
Total : 45 hours	

TEXT BOOKS:

1. Adam Jr Everett L. 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 Retal – 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 (Galgotiabooks, 2004)
2. Shanker Ravi – Industrial Engineering (Galgoti)
3. Chase & Production and operation Management, Richard Irwin London; 1995, 7th ed.
4. Production & Operations Management. – Kanishka Bedi, (Oxford University Press)

SKILL ENHANCEMENT COURSE - 04
FASHION FOOTWEAR PRODUCTS (P)
(CourseCode:24FDVS2405)

Credits:0+3

(CFA=60+ESE=40)

Objectives:

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

Specific Learning Outcome:

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

UNIT-I

Drawing Footwear and Accessories on different surfaces Dimensional drawing of footwear and accessories – drawing using dimensions and measurements Dimensional drawing of footwear and accessories – drawing different perspectives.

UNIT-II

Illustrate Footwear Design for Children- Shoe, flip flops, sandals, boots, kitten heel shoe, loafers, jutti, jazz shoes, hurache shoe, jully shoes kung fu shoes, festival willies.

UNIT-III

Illustrate Footwear Design for Women- 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, for sandal, evening sandal, ballet pump, plat form sandal, retro perforate court shoe, Birkenstock style sandal, thong sandal.

UNIT-IV

Illustrate Footwear Design for Men- 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-V

Illustrate Accessories Design for Men -wallets bells, suspendess, socks, card haoldrs, key chains, headwraps, neektie, cufflinks, cravats, pocketsquares, muffler, umberella. Illustrate Accessories Design for Women- Hand bags and it varieties, belts, suspenderi, neecktier hair accessories hats and caps, head wraps, cufflinks, umbrellas, crawats, various bracelets.

PRACTICALSCHEDULE

No.of week (3hrs.perweek)	Topics covered
1st to 3rd Week	<ul style="list-style-type: none"> Drawing Footwear and Accessories on different surfaces Dimensional drawing of footwear and accessories – drawing using dimensions and measurements Dimensional drawing of footwear And accessories—drawing different perspectives.
4th to 6th Week	<ul style="list-style-type: none"> Illustrate Footwear Design for Children- Shoe, flip flops, sandals, boots, kitten heel shoe, loafers, jutti, jazz shoes, huracheshoe, jully Shoes, kungfu shoes, festival willies.
7th to 10th Week	<ul style="list-style-type: none"> Illustrate Footwear Design for Women- Boots, floaters, gladiators, majaris, heels, wedges, sandals, beellies, flipflops, two part sandal jewel trim, sandal with gem trim, sequined shoe with full leather of the shoe from different angles, formal sandal, evening sandal, ballet pump, platform sandal, retro perforate court shoe, Birkenstock style sandal, thong sandal.
11th to 13th Week	<ul style="list-style-type: none"> Illustrate Footwear Design for Men- 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.
14th to 15th Week	<ul style="list-style-type: none"> Illustrate Accessories Design for Men -wallets bells, suspenders, socks, card holders, key chains, head wraps, necktie, cufflinks, cravats, pocket squares, muffler, umbrella.
Total: 45 hours	<ul style="list-style-type: none"> Illustrate Accessories Design for Women- Hand bags and its varieties, belts, suspender, necktie hair accessories hats and caps, Head wraps, cufflinks, umbrellas, cravats, various bracelets.

TEXT BOOKS:

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

REFERENCES:

1. 21st Century Jewellery Mr the Le Van
2. Accessories options : hrugss caxues stoles Bead Fantasies 2–More beautiful easy to make jeweler Takako Saneji

MAJOR COMPONENTS -12
DESIGNING & PATTERN MAKING OF FOOTWEAR-I (P)
(Course Code: 24FDVC2406)

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 form 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. Stiffener
 6. Toepuff
 7. Sandal insole

UNIT-V

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

PRACTICALSCHEDULE

No.ofweek (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"> • 8thweek:Mid-Semester Examinations • Derivation of standards for • 1.Derby,2. Oxford,3.Slip on /pantafola • 4.Boot ,5.Moccasin, 6.Court shoe • 7.Sandals
11 th to 13 th Week	<ul style="list-style-type: none"> • Preparation /Derivation of Bottom profiles • Outsole • Insole • Insocks • Half insocks • Stiffener • Toepuff • Sandal insole
14 th to 15 th Week	<ul style="list-style-type: none"> • Derivation/preparation of Derby upper, lining shell and sectional patterns.
Total:60hours	<ul style="list-style-type: none"> • Derivation of oxford upper, lining shell and sectional patterns.

TEXT BOOKS:

1. Text book of footwear manufacture by J.H.Thornton
2. Manual of shoemaking—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.

MAJOR COMPONENTS -13
DESIGNING & PATTERN MAKING OF LEATHER GOODS-I (P)
(CourseCode: 24FDVC2407)

Credits:0+3

(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 case flap 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 cellphone 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.

PRACTICALS SCHEDULE

No. of week (3 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 an 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	Developing of card case flap type model <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare an 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 15 th Week Total: 45 hours	Developing of cell phone pouch open and closed type model <ul style="list-style-type: none"> • Select the design • Sketch the design • Prepare an 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. Parker, Xenialey, Working with leather Charles scribners sons, 1972–Mary F. MMCNOHY
2. Moosa, Nayeem–Process of Leather making: June 23, 2020.
3. Art of Leather Crafting–E Books.
4. Leather crafting for Beginners –E Books.
5. The bag making by me–E books.
6. Leather craft and Designing–Kindle edition.

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

MAJOR COMPONENTS -14

DESIGNING & PATTERN MAKING OF LEATHER GARMENTS–I(P)

(CourseCode: 24FDVC2408)

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(3miniature)
Simple jacket
Attach hoodie
Attach zip

UNIT-III

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

UNIT-IV

Developing skirt
Plain skirt
Pleated skirt
Circular skirt

UNIT-V

Developing of trouser(3miniature)

Pencil fit trouser
Pleated trouser
Bell bottom trouser

PRACTICALSCHEDULE

No.ofweek (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Developingofpattern <ul style="list-style-type: none"> • Measurement • Pattern making for leather garments • Front bodice • Back bodice • Sleeve
4 th to 6 th Week	DevelopingofJacket(3miniature) <ul style="list-style-type: none"> • Simple jacket • Attach hoodie • Attach zip
7 th to 10 th Week	Developingleatherjacket(3miniature) <ul style="list-style-type: none"> • Long coat • Sleeve • With pocket
11 th to 13 th Week	Developingskirt <ul style="list-style-type: none"> • Plain skirt • Pleated skirt • Circular skirt
14 th to16 th We ek Total:60 hours	Developingof trouser(3 miniature) <ul style="list-style-type: none"> • Pencil fit trouser • Pleated trouser • Bell bottom trouser

TEXT BOOKS:

1. Parker,Xenialey, WorkingwithleatherCharlesscribners sons,1972–MaryF.M MCNOHY
2. Moosa,Nayeem–ProcessofLeathermaking:June23,2020.

REFERENCES:

1. Manuals from CLRI
2. Manuals from NIMI Publications

ON THE JOB TRAINING
INTERNSHIP–IV
(Course code:24FDVE2409)

Credits:0+4

(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.

FieldVisit:

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 or middle or End of the 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 –V
MAJOR COMPONENTS – 15
MATERIAL MANAGEMENT
(CourseCode: 24FDVC3501)

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 management linkages, elements of production process cost involved in material management.

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.ofweek (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 formaterial management
4 th to 6 th Week	<ul style="list-style-type: none"> • Concept,objectivesofsupply-production and distribution system, • Roleand managemen to 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 • 8thweek: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 tool sinindustries
14 th to16 th We ek Total:60 hours	<ul style="list-style-type: none"> • General discussion on concept of cost and cost classification, specific cost associated with material management. • Cost in shortrun-longrun-revenue-profit

TEXT BOOKS:

1. DuttA.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. 2.Gopalakrishnan.P.&Sundaresan.M,Materials management;An Integrated Approach,Prentice Hall of India, Pvt. Ltd. New Delhi
3. 3.Varma.M.M.,Essentials of Store Keeping and Purchasing,Sultanchand & Sons,New Delhi

MAJOR COMPONENTS - 16
HUMAN RESOURC MANAGEMENT
(Course Code: 24FDVC3502)

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.ofweek (4hrs.perweek)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Human resource philosophy-changin genvironments 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, 8thweek:Mid-Semeste Examinations training –techniques-developing managers-management development-performance appraisalin practice-managing careers-career planning and development-managing promotions and transfer
11 th to13 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	<ul style="list-style-type: none"> Labour relations-employee security-industrial relation-discipline administration-managing dismissals and separation-labour welfare-
Total:60hours	<ul style="list-style-type: none"> 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,
3. "Industrial Relation and Labour Welfare", Adithya Publication, CBE, 2001
4. VSPRoA, 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.&AssissiMenacheri, "Industrial Relation and Labour Welfare", Adithya Publication, CBE, 2001
3. 3.VSPRoA, Human Resource Management: Text and Cases, I Edition, Excel Books

MAJOR COMPONENTS – 17
SPECIALTY AND NON LEATHER FOOTWEAR

(Course Code: 24FDVC3503)

Credits:4+0

(CFA=40+ESE=60)

Objective:

The objective of this course is present the students on the technology to make non-leather and specialty footwear.

Specific Learning Outcome:

At the end of this course the students will be able to understand the techniques in making non-leather and other specialty footwear.

UNIT I

LASTING

Principles and methods of lasting for different types of construction – Manual and mechanical method. Effect of temperature, humidity and materials in lasting and making operations. Types of machinery and the principles involved in mechanical operations. Management of the lasting and making department.

UNIT II

GOOD YEAR WELTED CONSTRUCTION

Principle of Good Year Welled construction; preparation of uppers; Insoles – Rib attaching – Sewing in welt sole attaching – Variation in the welted method. Finishing and machinery.

UNIT III

STITCH DOWN AND OTHER CONSTRUCTION

Principle and methodology of Stitch down Construction. Upper preparation- The machine & sewn method; Veldtschoen construction: Veldtschoen – Turnshoes & Little way method. California, San Francisco, DVP and DMS.

UNIT IV

SPORTS & MOULDED FOOTWEAR

Footwear's for sports. Relation between surface, activity and footwear. Materials and method of construction Preparation of uppers, sequence of operations, sponge rubber, moulded on slippers, soled rubber moulded on footwear, thermo plastic injection moulded on footwear, cellular polyurethane moulded on footwear, Health and Safety

UNIT V

ORTHOPEDIC & THE RAPEUTIC FOOTWEAR

Need of Pedorthic and anatomically-correction, friction reduction and comfort qualities, off loading technique, materials and construction, evaluation technique

LECTURE SCHEDULE

No.ofweek (4hrs.perweek)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Principle of Good Year Welted construction; preparation of uppers;Insoles–Rib attaching–Sewing in welt sole attaching–Variation in the welted method. Finishing and machinery.
4 th to 6 th Week	<ul style="list-style-type: none"> Principle of Good Year Welted construction; preparation of uppers;Insoles–Rib attaching–Sewing in welt sole attaching–Variation in the welted method. Finishing and machinery.
7 th to 10 th Week	<ul style="list-style-type: none"> Principle and methodology of Stitch down Construction. Upper preparation- The machine & sewn method;Veldtschoen construction:Veldtschoen–Turn shoes & Little way method. California, Sanfranscino, DVP and DMS. 8thweek:Mid-Semester Examinations
11 th to13 th Week	<ul style="list-style-type: none"> Footwear’s for sports .Relation between surface, activity and footwear. Materials and method of construction Preparation of uppers, sequence of operations, sponge rubber, moulded on slippers,soled rubber moulded on footwear, thermoplastic injection moulded on footwear,cellular polyurethane moulded on footwear, Health and Safety
14 th to 15 th Week Total:60hours	<ul style="list-style-type: none"> Need of Pedorthic and anatomically-correction,friction reduction and comfort qualities, off loading technique, materials and construction, evaluation technique

REFERENCES:

1. Thornton,J.H.,“Text book of footwear Manufacture”,National Trade Press Book Ltd.,London, 1970.
2. Skoggard,I.A.,“Modern Shoe Making–Lasting”,SATRAPublication,Sharpe,1996
3. Miller,R.G.,“Manual of Shoe Making”,Clarks Ltd.,London,1978

MAJOR COMPONENTS -18
LIFE STYLE ACCESSORIES DESIGNING(P)
(Course Code:24FDVC3504)

Credits:0+3

(CFA=60+ESE=40)

Objectives:

- To enable the students to learn the lifestyle 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. Gestalt's law and its importance in design. Semiotics in design, Brain storming 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 leather goods, relevance of personal accessories in respect of sociological status, visual appeal and Veblen conspicuous consumption, trickle down theory and its relevance in product history.

UNIT-III

Elements of the origins 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. Gestalt's law and its importance in design. Semiotics in design, Brain storming 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.

PRACTICALSCHEDULE

No.ofweek (3 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 leather goods,relevance of personal accessoriesin respect of sociological status, visual appeal Veblen conspicuous consumption ,trickled own 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 cenario of the design elements. 8thweek:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> The golden rule innature and importance of it in design. Gastrulas law and its importance in design. Semiotics in design, Brainstorming method of idea generation.
14 th to16 th We ek Total:45 hours	<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 byJ.H.Thornton
2. Manual of shoe making–clarks ltd
3. Compre hensive Footwear Technology byS.N.Ganguly.

REFERENCES

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

MAJOR COMPONENTS -19
DESIGNING AND PATTERN MAKING OF FOOTWEAR–II(P)
(Course Code: 24FDVC3505)

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 footwear 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 outside 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 outside 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 profile

UNIT-III

Developing patterns for Moccasin models (lace type)

- Masking the Last
- Make in and outside 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 outside 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 outside 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.ofweek (4 hrs.per week)	Topicscovered
1 st to3 rd Week	Developing patterns for Derby models <ul style="list-style-type: none"> • Masking the Last • Make in and outside 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 to6 th Week	Developing Oxford models <ul style="list-style-type: none"> • Masking the Last • Make in and outside forme • Make mean forme • Make a W standard • Make a upper base

	<ul style="list-style-type: none"> • Make a upper shell • Make a upper components • Make a lining shell • Make a lining components • Make a bottom profiles.
7 th to10 th Week	Developing patterns for Moccasin models(lacetype) <ul style="list-style-type: none"> • Masking the Last • Make in and outside 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. • 8thweek:Mid-SemesterExaminations
11 th to13 th Week	Developing patterns for Ankle boot <ul style="list-style-type: none"> • Masking the Last • Make in and outside 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 to16 th Week	Developing patterns for Sandals <ul style="list-style-type: none"> • Masking the Last • Make inside and outside forme • Makemean 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.
Total:60hours	

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 shoemaking –SATRA
2. Manual of shoemaking– Clarks
3. Swamsiddha manual by FDDI

MAJOR COMPONENTS -20

DESIGNING AND PATTERN MAKING OF LEATHER GOODS–II(P)

(CourseCode: 24FDVC3506)

Credits:0+3

(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' handbag –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' handbag-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.ofweek (3 hrs. per week)	Topics covered
1 st to 3 rd Week	Ladies' handbag – tote model Select the design <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' handbag – 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 • 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
11 th to 13 th Week	Travel bag <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: 45 hours	Executive bag <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. Parker, Xenialey, Working with leather Charles scribnerssons, 1972–Mary F. MMCNOHY
2. Moosa, Nayeem–Process of Leather making : June 23, 2020.
3. Art of Leather Crafting–E Books.
4. Leather crafting for Behinars –E Books.
5. The bag making by me – E books.
6. Leather craft and Designing – Kindle edition.

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publication

MAJOR COMPONENTS -21

DESIGNING AND PATTERN MAKING OF LEATHER GARMENTS – II(P)

(CourseCode: 24FDVC3507)

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 overcoat (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

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- 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 overcoat (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

	<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 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 • 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: 60 hours	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. Parker, Xenialey, Working with leather Charles scribners sons, 1972 – Mary F.M MCNOHY
2. Moosa, Nayeem – Process of Leather making: June 23, 2020.

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

**ON THE JOB TRAINING
INTERNSHIP –V
(Coursecode:24FDVE3508)**

Credits:0+4

(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 or middle or End of the 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 – VI
MAJOR COMPONENTS – 22
ENTREPRENEURSHIP DEVELOPMENT
(CourseCode: 24FDVC3601)

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. Introduction to GST, registration process, Start-up india, and introduction to various funds / schemes of government for entrepreneurship development.

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: 60 hours	<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. Introduction to GST, registration process, Start-up india, and introduction to various funds/schemes of government for entrepreneurship development

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

MAJOR COMPONENTS–23
FOOTWEAR RETAILING
(CourseCode: 24FDVC3602)

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 in 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, department of stores, store chains, single unit independent stores.

UNIT-IV :

Classifications of major discount operations, pricing, characteristics of major discount to operations buyers rate. Timing a purchase, indirect purchasing , incentives of vendor.

UNIT-V:

Pricing Methods, costing and IT applications in retail purchasing in domestic market Vs purchasing in foreign markets. Reason , problems, methods , buyers qualification.

LECTURE SCHEDULE

No.of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Classifications of major discount operations ,characteristics of major discount operations buyers role. What of price ,timing a purchases,pricing,indirect purchasing,incentives of vendor.
14 th to 16 th Week Total:60 hours	<ul style="list-style-type: none"> 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 BermanB
2. Retail Management LevyMichael
3. Mail management:Singh & Shrinivasan

REFERENCES

1. Retail Management BermanB
2. Retail Management LevyMichael
3. Mail management:Singh & Shrinivasan

MAJOR COMPONENTS-24

MATERIAL TESTING (P)

(CourseCode: 24FDVC3603)

Credits:0+4

(CFA=60+ESE=40)

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-%e 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 centre's in India-water vapour permeability (leather)-water vapor absorption (Leather)-shoe flexing-beneward flexing- heat resistance - seam strength-water resistance-strap strength

PRACTICAL 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 crackiness - pipeness-rub fastness (wet and dry)- Waterproofness – 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-archimedes principle – Insoles-tensile properties-water absorption and desorption-density of insole materials, soles tearing properties
14 th to 15 th Week Total: 60 hours	<ul style="list-style-type: none"> Footwear testing centres in India-water vapour permeability (leather)-water vapor absorption (Leather)-shoe flexing- Benward 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

MAJOR COMPONENTS - 25

CAD FOR FOOTWEAR (P)

(CourseCode: 24FDVC3604)

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

Introduction to designing software's – Adobe Photoshop, Coral draw and illustrator.

Starting CAD – CAD screen components – Starting a drawing: Open drawings, Create drawings (Start from scratch, Use a template & Use a wizard) – Invoking commands

In CAD – Drawing lines in CAD – Co-ordinate systems: Absolute co-ordinate system, Relative co-ordinate system – Direct distance method – Saving a drawing: Save & Save As – Closing a drawing – Quitting CAD

Unit-II

Introduction To Different Types Tool Bar In Footwear CAD, Draw Tools, Designing Tools, Pattern Tools, Grading Tools, Editing Tools And Making , Marking And Other Output Related Tools, Ideas About Geometric Primitives.

Unit-III

Digitising

Start Digitising, Digitising Submenu, Function Of Each Submenu, Spline, Corner, Digitising Of Large Object, Coordinates Etc.

Drawing Designing And Editing:

Point, Line, Arc, Ellipse, Elliptical Arc, Spline, Text, Parallel, Fix Parallel, Variable Parallel, Mirror, Translate, Rotate, Fillet, Chamfer, Ideas About Sell And Gp And Editing Commands

UNIT-IV

Pattern Making:

Create Pattern, General Elements, Attach And Detach Gp, Exchange Boundary, Exchange Axis, Pattern Properties, Attach Element Detach Element And Pattern Editing

Markers:

Create Markers, Notch, Drill, Decoration, Carrier Line (Visible And Invisible) Modifying Markers, Concept Of Marker Library, Add offset lines for different allowances, variable offset for lasting allowance, Define piece boundary, add fillets, notches

UNIT-V

Adding of drills and stencils:

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

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 (4hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Introduction to designing software's - Adobe Photoshop, Coral draw and illustrator.• Starting CAD – CAD screen components – Starting a drawing: Open drawings, Create drawings (Start from scratch, Use a template & Use a wizard) – Invoking commands in CAD – Drawing lines in CAD – Co-ordinate systems: Absolute co-ordinate system, Relative co-ordinate system – Direct distance method – Saving a drawing: Save & Save As – Closing a drawing – Quitting CAD
4 th to 6 th Week	<ul style="list-style-type: none">• Introduction To Different Types Tool Bar In Footwear CAD, Draw Tools, Designing Tools, Pattern Tools, Grading Tools, Editing Tools And Making , Marking And Other Output Related Tools, Ideas About Geometric Primitives.
7 th to 10 th Week	<ul style="list-style-type: none">• Start Digitising, Digitising Submenu, Function Of Each Submenu, Spline, Corner, Digitising Of Large Object, Coordinates Etc.• 8th week: Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none">• Pattern Making:• Create Pattern, General Elements, Attach And Detach Gp, Exchange Boundary, Exchange Axis, Pattern Properties, Attach Element Detach Element And Pattern Editing• Markers: Create Markers, Notch, Drill, Decoration, Carrier Line (Visible And Invisible) Modifying Markers, Concept Of

	Marker Library, Add offset lines for different allowances, variable offset for lasting allowance, Define piece boundary, add fillets, notches
14 th to 16 th Week Total: 60 hours	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 Grading: <ul style="list-style-type: none"> • Grade the style either normally or apply modifiers for non standard grading • Check the graded styles using tack and measure functions • Generate a cut file for cutting of patterns

TEXT BOOKS:

1. Manual of shoe designing by Md. Sadique Principal scientist clri Chennai.
2. Training Manual : Procam for Dimension 6.1
3. Training Manual : shoemaster Qs 10.4
4. Training Manual : Delcam Crispin

REFERENCES

1. Manuals from Software suppliers
2. Handouts

MAJOR COMPONENTS - 26
CAD FOR LEATHER GOODS & GARMENTS (P)
(CourseCode:24FDVC3605)

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

Introduction to designing software's – Adobe Photoshop, Coral draw and illustrator.

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 handbag
- 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's & 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 skirts and waist coat
- Prepare and digitize patterns for skirts and waistcoat
- 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	<ul style="list-style-type: none">• Introduction to designing software's-Adobe Photoshop,Coral draw and illustrator. 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• Perform nesting for hand bag• Plot and cut patterns using pattern plotter/cutter for hand bag
4 th to 6 th Week	2 CAD for leather goods: wallet for both men's & women's <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>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>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: 60 hours	<p>CAD for leather garments: waist coat and its 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.

TEXT BOOKS:

1. Modular employees skill textbook from NIMI

REFERENCES

1. Manuals from Software suppliers
2. Handouts

MAJOR COMPONENTS-27
PORTFOLIO (P)
(CourseCode: 24FDVC3606)

Credits:0+4

(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 confidence in their product developments skills—Designing, cutting, sewing, lasting and finishing.

Unit-I

Forecasting:

- Trend Forecast
- Theme writeup
- Mood Board

Unit-II

Illustration/Creating Design:

- Theme board
- Colour board
- Customer profile

Unit-III

Sourcing:

- Design Development
- Leather Sourcing—swatches
- Illustration with back drops

Unit-IV

Costing:

- Specification Sheet
- Pattern Making

Unit-V

Product Making:

- Constructions
- Final Presentation

PRACTICAL SCHEDULE

No.of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	Forecasting: <ul style="list-style-type: none"> • Trend Forecast • Theme writesup • Mood Board
4 th to 6 th Week	Unit-II Illustration/Creating Design: <ul style="list-style-type: none"> • Theme board • Colour board • Customer profile
7 th to 10 th Week	Sourcing: <ul style="list-style-type: none"> • Design Development • Leather Sourcing –swatches • Illustration with back drops
11 th to 13 th Week	Costing: <ul style="list-style-type: none"> • Specification Sheet • Pattern Making
14 th to 15 th Week Total :60 hrs	Product Making: <ul style="list-style-type: none"> • Constructions • Final Presentation

TEXT BOOKS:

1. Research and Methodology by C.R Kothari, Gaurav Garg.
2. Research and Methodology by Ranjit kumar
3. Research Design by R.Pannerselvam

REFERENCES:

1. Case Study Research Design and Methods by Robert K. Yin
2. The Action Research Dissertation(A Guide FOR Students and Faculty)by Kthryn Herr, Gary L. Anderson
3. Research Design by Jhon W. Creswell
4. Campbell, Det. Ai(2001) how to develop a professional portfolio: Allyn and bacon by watrier, john w.
5. Portfolio presentation for fashion designers, Linda Tain, PDF-e Book.

INTERNSHIP CUM PROJECT

(CourseCode: 24FDVE3607)

Credits:0+6

(CFA=60+ESE=40)

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.

SEMESTER-VII
BASKET-I (FOOTWEAR MANUFACTURING)
MAJOR COMPONENTS - 28
RESEARCH METHODOLOGY
(Course Code:24FDVC4701)

Credits:4+0

(CFA=40+ESE=60)

Objectives:

- To make the students understand about Research Processing.
- To enable the students to gain knowledge on to conduct research, article writing, presentation and concluding of research

Specific Learning Outcome:

After learning this paper the students will gain knowledge in , Research Process, Conducting Literature Review, Information's Sources, Data collection, Sampling, Citation and listing system of documents

UNIT-I

Meaning of Research: Objectives of research, Types of Research, Research Process, Problem Statement, Research Design,

UNIT-II

Problem Formulations: Conducting Literature Review, Information's Sources (Books, monographs, reviews, blogs, etc) Information Retrieval, Role of libraries in Information Retrieval, Research Gap,

UNIT-III

Research Design: Experimental/Theoretical/Empirical Research, Cause effect Relationship, Field Experiment, Data/variable types and classifications, Data collection- Methods and Tools

UNIT-IV

Data Analysis and Interpretations: Sampling, Sampling Error, Statistical Methods/Tools – Measures of Central Tendency, Test of Hypothesis – Correlations and regression analysis.

UNIT-V

Writing Research Articles and Thesis: Guidelines for Writing the abstract, introduction, methodology, results and discussion, Conclusion section of manuscript, Plagiarism, Ethical Considerations in Research.

LECTURE SCHEDULE

No.of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Objectives of research, Types of Research, Research Process, Problem Statement, Research Design,
4 th to 6 th Week	<ul style="list-style-type: none"> Conducting Literature Review, Information's Sources (Books,monographs,reviews,blogs,etc) Information Retrieval, Roleoflibraries in Information Retrieval, Research Gap,
7 th to 10 th Week	<ul style="list-style-type: none"> Experimental/Theoretical/Empirical Research, Cause effect Relationship, Field Experiment, Data/variable types and classifications, Data collection-Methods and Tools 8thweek:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> Sampling, Sampling Error, Statistical Methods/Tools –Measures of Central Tendency, Test of Hypothesis –Correlations and regression analysis
14 th to 15 th Week Total:60hrs	Guidelines for <ul style="list-style-type: none"> Writing the abstracts, introductions, methodology,results and discussion, Conclusion, Section of manuscript, Plagiarism and Ethical Considerations in Research.

TEXTBOOKS:

1. Research and Methodology by C.R Kothari, Gaurav Garg.
2. Research and Methodology by Ranjit kumar
3. Research Design by R.Pannerselvam

REFERENCES:

1. Case Study Research Design and Methods by Robert K. Yin
2. The Action Research Dissertation (A Guide FOR Students and Faculty) by Kithryn Herr, Gary L. Anderson
3. Research Design by Jhon W. Creswell

MAJOR COMPONENTS - 29
ENTERPRISE DEVELOPMENT PROGRAMME
(CourseCode:24FDVC4702)

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

Enterprise–Definition, Types of Enterprise–Sole proprietorship, Partnership, Co-operative society, Joint stock company-Definition Meaning, Functions, Objectives, roles.

UNIT II

Small Enterprise :An Introductory frame work – Project Identification and selection- Project formation–Project appraisal-Legal, regulatory and statutory body-clearance approvals and NOC – compliance – Financing Enterprise – boot strapping- ownership structures.

UNIT III

Organizing and Enterprise–determining activities group of activities, assigning duties, Delegating authority, coordinating activities.

UNIT IV

Enterprise selection–Basic strategy, proficiency and competency, market assessment missed opportunities, poor returns and substantial financial losses.

UNIT V

Accounting for Enterprise–Break even analysis–Element of financial statements-Growth strategies – Intellectual property – Innovation – Knowledge management – Leadership – governance sickness and rehabilitation – application of electronic commerce.

LECTURE SCHEDULE

No.of week (4hrs.per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">Enterprise–Definition, Types of Enterprise–Sole proprietorship, Partnership, Co-operative society, Jointstock company-Definition Meaning, Functions, Objectives, roles.
4 th to 6 th Week	<ul style="list-style-type: none">Small Enterprise :An Introductory frame work – Project Identification and selection- Project formation – Project appraisal- Legal, regulatory and statutory body- clearance approvals and NOC–compliance–Financing Enterprise–boot strapping-ownership structures.
7 th to 10 th Week	<ul style="list-style-type: none">Organizing and Enterprise – determining activities group of activities, assigning duties, Delegating authority, coordinating

	activities. • 8th week: Mid-Semester Examinations
11 th to 13 th Week	• Enterprise selection–Basic strategy, proficiency and competency, market assessment missed opportunities, poor returns and Substantial financial losses.
14 th to 16 th Week Total: 60 hours	• Accounting for Enterprise – Break even analysis – Element of financial statements–Growth strategies – Intellectual property – Innovation–Knowledge management–Leadership–governance Sickness and rehabilitation–application of electronic commerce.

REFERENCES:

1. Hambrick, D (1982), environmental scanning and organization strategy, strategic management journal. 3(2). pp. 159-174
2. SWOT analysis: Discover new opportunities, Manage and eliminate threats.
“www.mindtools.com.loop. Retrieved 24 February 2018

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

MAJOR COMPONENTS – 30
SPORTS SHOE MANUFACTURING
(Course Code: 24FDVC47B1)

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 Football, 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 Football, 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: 60 hours	<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 William A, ed. The complete footwear Dictionary Krieger publishing, 1993.
3. The shoe in sport, Mosby-yearbook, 1989.

REFERENCES

1. Cavanagh, Peter. R. "The Running shoe book"
2. Cheskinen, Melvyn. P. "The complete handbook of athletic footwear" Fairchild books 1986.

MAJOR COMPONENTS – 31
FOOTWEAR FABRICATION (P)
(Course Code: 24FDVC47B2)

Credits:0+6

(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 (6 hrs.per week)	Topicscovered
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

	<ul style="list-style-type: none"> • 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 <p>Making of Moccasin 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.
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	<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.
Total: 90 hours	

TEXT BOOKS:

1. Text book of footwear manufacture by J.H. Thornton
2. Manual of shoemaking—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

MAJOR COMPONENTS– 32

GAIT ANALYSIS

(Course code:24FDVC47B3)

Credits:4+0

(CFA=40+ESE=60)

Objective

The objective of this course is provide knowledge and demonstration on GAIT analysis

Specific Learning Outcome

At the end of this course the students will be able to understand GAIT analysis and will be able to appreciate their use in footwear design

UNIT I

LOWER LIMB ANATOMY

Basic anatomical terms; Neuro muscular anatomy ;Bones of pelvis and legs;Joints,Ligaments, Muscles, Tendons and Fascia.

UNIT II

PRINCIPLES OF BIO MECHANICS

Reference planes of motion; Kinematics; Limb Movements; Motion Of Joints; Kinetics; Force; Momentum; Inertia ; Pressure; Torque; Work, Power and Energy.

UNIT III

GAIT

Terminology used in Gait; Gait Parameters Definition and Description; Phases of Gait Cycle; Fundamentals in Gait Analysis; Balance and Posture; Ground Reaction Force; Energy Transfer; Mechanical Analysis; Mathematical Modelling

UNIT IV

INFLUENCE OF FOOTWEAR ON GAIT

Influence of footwear on hip, knee, ankle and foot movement; Abnormal walking base; Common pathologies affecting gait and corrective measures using footwear.

UNIT V

GAIT ANALYSIS TECHNIQUE

Visual/observational gaitanalysis; 2Dvideo analysis; 3Dvideoanalysis; Inertialsensors; Electro goniometers; Force platforms; Wearable sensors; Pressure platforms; Electro myography; Energy consumption.

LECTURE SCHEDULE

No.of week (4 hrs.per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Basic anatomical terms; Neuro muscular anatomy; Bones of pelvis and legs; Joints, Ligaments, Muscles, Tendons and Fascia.
4 th to 6 th Week	<ul style="list-style-type: none"> Reference planes of motion; Kinematics; Limb Movements; Motion Of Joints; Kinetics; Force; Momentum; Inertia ; Pressure; Torque; Work, Power and Energy.
7 th to 10 th Week	<ul style="list-style-type: none"> Terminology used in Gait; Gait Parameters Definition and Description; Phases of Gait Cycle; Fundamentals in Gait Analysis; Balance and Posture; Ground Reaction Force; Energy Transfer; Mechanical Analysis; Mathematical Modelling 8th week: Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> Influence of footwear on hip, knee, ankle and foot movement; Abnormal walking base; Common pathologies Affecting gait and corrective measures using footwear.
14 th to 15 th Week Total :60 hours	<ul style="list-style-type: none"> Visual/observational gait analysis; 2D video analysis; 3D video analysis; Inertial sensors; Electro gonio meters; Force platforms; Wearable sensors; Pressure platforms; Electro myography; Energy consumption.

TEXT BOOK:

- Gait Analysis – An Introduction; Editor(s): Levine & Richards & Whittle, Release Date: 10 Jul 2012, Churchill Livingstone Print Book, ISBN:9780702042652, eBook ISBN:9780702051999, Pages: 192, Dimensions: 246 X 189
- Basic biomechanics. Susan. J.Hall. Sixth edition 2011, McGraw-Hill Humanities/Social Sciences/Languages; ISBN-10:0073376442 ISBN-13: 978-0073376448
- Fundamentals of Biomechanics, Duane Knudson. Springer; Second edition (2007) ISBN-10: 0387493115 ISBN-13: 978-0387493114

REFERENCES:

- Kinesiology – The mechanics and pathomechanics of human movement. Carol A. Oatis. Edition 2, Lippincott Williams & Wilkins, 2009 ISBN 0781774225, 9780781774222
- Gait Analysis – Normal and pathological function. Jacquelin Perrey & Judith M. Burnfield. SLACK Incorporated; 2nd Revised edition (15 March 2010) ISBN-10: 1556427662, ISBN-13: 978- 1556427664,
- Clinical Gait analysis – Theory and Practice. Chris Kirtley, Churchill Livingstone; 1 edition 2005; ISBN-10: 0443100098, ISBN-13: 978-0443100093.

MAJOR COMPONENTS– 33

PEDORTHIC FOOTWEAR

(Course code:24FDVC47B4)

Credits:4+0

(CFA=40+ESE=60)

Objective

The objective of this course is present the complications associated with foot and strategies to fabricate appropriate footwear

Specific Learning Outcome

At the end of this course the students will be able to understand the foot deformities and the need/means for the development of specialty footwear

UNIT I

INTRODUCTION

Pedorthics–Role of Pedorthist– Pedorthic evaluation– Patient management- implementation and Practice management.

UNIT II

FOOT DEFORMITIES AND LOCOMOTION

Descriptive knowledge on High arches, Flat feet, Forefoot varus, Calluses, Plantar fasciitis, Metatarsalgia, Morton's neuroma, Hallux valgus, Hallux Rigidus, Hammer or Claw toes, Heel spur, Talgia, Frequent ankle sprains. Gait analysis- gait cycle, Gait patterns. Types of forces friction,

UNIT III

FOOT ORTHOSES

Orthoses; Raw material – Kind of foot orthoses- Fabrication techniques and Finishing. Clinical management.

UNIT IV

FOOT COMPLICATIONS AND LIFE STYLE DISEASES

Enumeration of Lifestyle diseases such as Diabetes, Obesity etc; Foot related complications; Risk levels of foot; Foot characteristics – low risk to high risk; Principles of therapeutic footwear and Bio-mechanical principles in design and development of footwear.

UNIT V

CORRECTIVE FOOTWEAR FABRICATION TECHNOLOGY

Overview-Footwear modifications - Heel modifications - Heel and Sole wedges – Customization of fit parameters–Stretching–Widening–Lengthening–Internal volume changes - Rocker bottom -Facilitation of entry and closure - Alterations including rebuilding, relasting, Shoe repair and shoe refurbishing.

LECTURE SCHEDULE

No.of week (4 hrs.per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Pedorthics – Role of Pedorthist – Pedorthic evaluation–Patient management-implementation and Practice management.
4 th to 6 th Week	<ul style="list-style-type: none">• Descriptive knowledge on High arches, Flat feet, Forefoot varus, Calluses, Plantar fascitis, Metatarsalgia, Morton's neuroma, Hallux valgus, Hallux Rigidus, Hammer or Clawtoes, Heelspur, Talgia, Frequent ankles prains. Gait analysis-gaitcycle, Gaitpatterns. Types of forcesfriction,
7 th to 10 th Week	<ul style="list-style-type: none">• Orthoses;Raw material- Kind of foot orthoses- Fabrication techniques and Finishing. Clinical management.• 8th week: Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none">• Enumeration of Lifestyle diseases such as Diabetes, Obesity etc; Foot related complications; Risk levels of foot ; Foot characteristics – low risk to high risk; Principles of therapeutic footwear and Bio-mechanical principles in design and development of footwear.
14 th to 15 th Week Total :60 hours	<ul style="list-style-type: none">• Overview- Footwear modifications - Heel modifications - Heel and So knowledges- Customization of fit parameters – Stretching– Widening – Lengthening - Internal volume changes – Rocker bottom-Facilitation of entry and closure-Alterations including rebuilding, relasting, Shoe repair and shoe refurbishing

TEXT BOOK:

1. D.J.Morton, The Human Foot, Hafner Publishing Co, New York, London, 1964.
2. CA Edwards, Orthopaedic shoe Technology, Precision Printing Co., Indiana, 1981

REFERENCES

1. Micheal W Whittle, "Gait Analysis: An introduction," Butterworth-Heinemann Publication.
2. J.H. Thornton, Textbook of Footwear Manufacture-National Trade Press Ltd, London, 1970.

ON THE JOB TRAINING
INTERNSHIP –VII
(Course code:24FDVE47B5)

Credits:0+4

(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 or middle or End of the semester. The students under take 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–VIII
Basket-I (Footwear Manufacturing)
MAJOR COMPONENTS – 34
PRODUCT PORTFOLIO MANAGEMENT
(Course Code: 24FDVC4801)

Credits:0+4

(CFA=40+ESE=60)

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 confidence on their products developments skills –Designing , cutting, sewing , finishing.

UNIT I

Management of New Product Development Process- Managing Product Life cycle Brands and Branding – Introduction to Products Management- Products Management Process- Products choice decisions and Models

UNIT II

Product plans elements of branding- brand identify- brand communication- brand positioning- brand image and personality- valuation of Products- Products valuation- Products choice decisions and models.

UNIT III

Marketing mix factors and products - managing Product over time- building brands in Indian market launching a new Products - revitalizing Products - branding strategies - Products extension strategies- Products portfolio management - managing Products across geographical borders.

UNIT IV

Marketing Products experience- digital Products – employment Products – co-branding- Products extension score card- culture and Products - Products flash backs- future Products priorities.

UNIT V

Sales and Distribution, Advertising – Products name plan- pricing systems- product distribution systems- advertising and sales promotion – product sales management- product and public relations service product marketing industrial product marketing product exports and international marketing- critical success factors in brand management.

PRACTICAL SCHEDULE

No.of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Management of New Product Development Process- Managing Product Life cycle Brands and Branding – Introduction to Products Management – Products Management Process- Products choice decisions and Models
4 th to 6 th Week	<ul style="list-style-type: none">• Product plans elements of branding - brand identify- brand communication-brand positioning-brand image and personality-valuation of Products- Products valuation- Products choice decisions and models.
7 th to 10 th Week	<ul style="list-style-type: none">• Marketing mix factors and products- managing Product over time- building brands in Indian market launching a new Products -revitalizing Products – branding strategies – Products extension strategies-Products portfolio management managing Products across geographical borders.• 8th week:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none">• Marketing Products experience – digital Products – employment Products – co-branding - Products extension scorecard- culture and Products - Products flashbacks- future Products priorities.
14 th to 15 th Week Total:60 hrs	<ul style="list-style-type: none">• Sales and Distribution, Advertising–Products name plan-pricing systems- product distribution systems- advertising and sales promotion – product sales management- product and public relations service product marketing industrial product marketing product exports and international marketing- critical success factors in brand management.

REFERENCE:

1. Product and Brand management by K.Panda.
2. Product and Brand management by U.C.Mathur.

MAJOR COMPONENTS – 35

ADVANCED SHOE STYLING & DESIGNING USING OF CAD/CAM (P)

(Course Code: 24FDVC48B1)

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, piecemaking, mirroring of pieces, adding of notches and fillets, assessments of the patterns, grading of one styles to another.

UNIT-I :

Introduction, Principles Capabilities and Operation of graphical work stations. Central processing Unit, Graphic terminals, input/output devices, interface and storage devices, networking concepts of LAN & WAN.

UNIT-II

Digitization: 2D & 3D Coordinate extracting principles of digital and analog conversion, digital input/output processing systems. CNC devices for computer aided cutting including laser jet and water jet, computer aided manufacturing.

UNIT-III

Computerized techniques for pattern generation grading and assessment of footwear patterns, consumptions calculations, pattern nesting and costing, stitching etc, through computerized techniques.

UNIT-IV

Last modelling – Digitization with 3D scanner, manipulation and optimization of digitized last use of macros. Last comparison, grading wizard flattening.

UNIT-V

3D visualization of last and styles concept of e-last, introduction to sole and sole mould design.

PRACTICAL SCHEDULE

No.of week (4hrs.perweek)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Introduction,Principles Capabilities and Operation of graphical workstations. Central processing Unit, Graphic terminals, input/output devices,interface and storage devices,networking concepts of LAN & WAN.
4 th to 6 th Week	<ul style="list-style-type: none">• Digitization:2D & 3D Coordinate extracting principles of digital and analog conversion,digital input /output processing systems. CNC devices for computer aided cutting including laser jet and water jet, computer aided manufacturing.
7 th to 10 th Week	<ul style="list-style-type: none">• Computerized techniques for pattern generation grading and assessment of footwear patterns,consumptions calculations, pattern nesting and costing, stitching etc, through computerized techniques.
11 th to 13 th Week	<ul style="list-style-type: none">• Lastmodelling–Digitization with 3D scanner,manipulation and optimization of digitized last use of macros. Last comparison, grading wizard flattening.
14 th to 16 th Week Total: 60 hours	<ul style="list-style-type: none">• 3D visualization of last and styles concept of e-last,introduction to sole and sole mould design.

TEXT BOOKS:

1. Groover,M.P.,and Zinimers,M.P.,“CAD/CAM,Computer Aided Design and Manufacturing”, Prentice Hall of India, 1984.
2. Newman and Sul, S.P., “Introduction to Computer Graphics, Published by MorganKaufmango, 1995

REFERENCES:

1. Desai and Abel, “Introduction to FEM”, “Step by Step guide to CAD for footwear”. CAD Centre, SDDC, CLRI.
2. Mass Customizat on and Footwear:Myth,Salvation Or Really?:AComprehensive Analysis Of The Adoption Of The Mass Customization Paradigm in Footwear by Claudio R. Bor, Sergio Dulio, Springer Verlag, 2007.

MAJOR COMPONENTS – 36
ADVANCE FOOTWEAR MANUFACTURING (P)

(Course Code: 24FDVC48B2)

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 Moccasin 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 Strobel 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 Goodyear 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.

UNIT-V

- Making of Court shoe with Stitchdown 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 (4hrs.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 Moccassin 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 <p>Making of Moccasin shoe with Strobel 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 closeduppers • Perform the finishing operations. • Quality control inspections.
11 th to 13 th Week	<p>Making of Slipon/pantafola shoe with Goodyear Welted 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 Stitchdown 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:

4. Text book of footwear manufacture by J.H.Thornton
5. Manual of shoemaking–clarks ltd
6. Comprehensive Footwear Technology.by S.N.Ganguly

REFERENCES

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

MAJOR COMPONENTS-37
FINISHING TECHNIQUES OF LEATHER PRODUCTS

(Course Code: 24FDVC4802)

Credits:3+0

(CFA=40+ESE=60)

Objectives:

To make the students understand about finishing techniques of leather products
To enable the students to gain knowledge on finishing techniques of leather products.

Specific Objective Learning:

The students understand about finishing techniques of leather products
The students to gain knowledge on finishing techniques of leather products.

UNIT I

Introduction, Basic Types of shoe Finishing, Tools used for Shoe Finishing, Material Used for shoe Finishing, Shoe Finishing Process, Uni-forming, repairing and antiquing Waxes- Cutting, Burnishing and polishing

UNIT II

Methods of Shoe Finishing
Dressing System, Spraying, Finishing Procedure for different types of Leather
Post finishing – treating non leather uppers

UNIT III

Problems with dressings
Repair and renovation on finishing, Causes of repairs works
Auxiliary operation
Testing shoe room finishes

UNIT IV

Bottom Finishing-Sequence of operation for Heatfinish, basic operation of sole finish, faults of finishing, quality check point.
Formulation of polymeric materials such as shoe polishes, upper dressings, glazing materials, lacquers, binders, resins-Properties and their application in footwear industry.
Manufacture of shoe finishes.

UNIT V

Finishing operation of leather goods & garments Determine requirements for repair of leather goods & garments Prepare leather goods & garments for repair work

LECTURE SCHEDULE

No.of week (3hrs.perweek)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Introduction,BasicTypes of shoe Finishing,Tools used for Shoe Finishing, Material Used for shoe Finishing, Shoe Finishing Process, Uni-forming, repairing and antiquing Waxes-Cutting,Burnishing and polishing
4 th to 6 th Week	<ul style="list-style-type: none"> • Methods of Shoe Finishing • Dressing System,Spraying,Finishing Procedure for different types of Leather • Post finishing–treating non leather uppers
7 th to 10 th Week	<ul style="list-style-type: none"> • Problems with dressings • Repair and renovation on finishing,Causes of repairs works • Auxiliary operation • Testing shoe room finishes • 8thweek:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Bottom Finishing – Sequence of operation for Heatfinish,basic operation of sole finish,faults of finishing,quality check point. • Formulation of polymeric materials such as shoe polishes, upper dressings, glazing materials,lacquers,binders,resins- Properties and their application in footwear industry. Manufacture of shoe finishes.
14 th to 16 th Week Total: 45 hours	<ul style="list-style-type: none"> • Finishing operation of leather goods & garments Determine requirements for repair of leather goods & garments Prepare leather goods & garments for repair work

TEXT BOOKS:

- 1.Text book of footwear manufacture by J.H.Thornton
- 2.Comprehensive Footwear Technology by S.N.Ganguly.

REFERENCES:

- 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, 1978.

MAJOR COMPONENTS-38
PROFESSIONAL PORTFOLIO–WORK PORTFOLIO(P)
(Course Code: 24FDV48B3)

Credits:0+5

(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 portfolioism or important them the quantity so we would only expert 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

Product Development-theme

Unit-I

- Idea generation-quick initial doodles, sketches and thought process.
- Development of ideas – Evidence of individual thinking.

Unit-II

- An interesting footwear and fashion and product design.
- Men's
- Kids
- Women's

Unit-III

- Fashion and Sports –Technical Athletic and Team Sports
- Indoor/Outdoor- Hiking, work wear and Sleepers

Unit-IV

- Back to school
- Beach footwear

Unit-V

- Last, Outsoles, outsole specifications – Trend forecast
- Trims and hardware
- Street Fashions
- Costing and Importance of Branding and brand creation process. Professional Profile creation in LinkedIn, Resume and covering letter preparation and job interview preparation techniques.

PRACTICAL SCHEDULE

No.of week (5 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Ideageneration-quick initial doodles,sketches and thought process.• Development of ideas-Evidence of individual thinking.
4 th to 6 th Week	<ul style="list-style-type: none">• An interest in footwear and fashion and product design.• Men's• Kids• Women's
7 th to 10 th Week	<ul style="list-style-type: none">• Fashion and Sports-Technical Athletic and Team Sports• Indoor/Outdoor-Hiking, work wear and Sleepers
11 th to 13 th Week	<ul style="list-style-type: none">• Back to school• Beach footwear
14 th to 15 th Week Total:75hrs	<ul style="list-style-type: none">• Last,Outsoles,outsoles specifications – Trend forecat• Trims and hard wear• Street Fashions• Costing• Importance of Branding and brand creation process. Professional Profile creation in LinkedIn, Resume and covering letter preparation and job interview preparation techniques.

REFERENCES

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

Internship-VIII/DISSERTATION

(Course Code: 24FDVE48B4)

Credits:0+10

(CFA=60+ESE=40)

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.

SEMESTER–VII

BASKET–II (LEATHER GOODS AND GARMENTS MANUFACTURING)

MAJOR COMPONENTS - 28

RESEARCH METHODOLOGY

(Course Code:24FDVC4701)

Credits:4+0

(CFA=40+ESE=60)

Objectives:

- To make the students understand about Research Processing.
- To enable the students to gain knowledge on to conduct research , article writing , presentation and concluding of research

Specific Learning Outcome:

After learning this paper the students will gain knowledge in, Research Process, Conducting Literature Review, Information's Sources, Data collection, Sampling, Citation and listing system of documents.

UNIT– I

Meaning of Research: Objectives of research, Types of Research, Research Process, Problem Statement, Research Design,

UNIT– II

Problem Formulations: Conducting Literature Review, Information's Sources (Books, monographs, reviews, blogs, etc) Information Retrieval, Role of libraries in Information Retrieval, Research Gap,

UNIT-III

Research Design: Experimental/Theoretical/Empirical Research, Cause effect Relationship, Field Experiment, Data/variable types and classifications, Data collection- Methods and Tools

UNIT– IV

Data Analysis and Interpretations: Sampling, Sampling Error, Statistical Methods/Tools – Measures of Central Tendency, Test of Hypothesis - Correlations and regression analysis.

UNIT– V

Writing Research Articles and Thesis: Guidelines for writing the abstracts, introductions, methodology, results and discussion, Conclusion, section of manuscript, Plagiarism and Ethical Considerations in Research.

LECTURE SCHEDULE

No.of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Objectives of research, Types of Research, Research Process, Problem Statement, Research Design,
4 th to 6 th Week	<ul style="list-style-type: none"> Conducting Literature Review, Information's Sources (Books,monographs,reviews,blogs,etc) Information Retrieval, Role of libraries in Information Retrieval, Research Gap,
7 th to 10 th Week	<ul style="list-style-type: none"> Experimental/Theoretical/Empirical Research, Cause effect Relationship, Field Experiment, Data/variable types and classifications, Data collection-Methods and Tools 8thweek:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> Sampling, Sampling Error, Statistical Methods/Tools –Measures of Central Tendency, Test of Hypothesis –Correlations and regression analysis
14 th to 15 th Week Total:60hrs	Guidelines for <ul style="list-style-type: none"> Writing the abstracts, introductions, methodology, results and discussion, Conclusion, Section of manuscript, Plagiarism and Ethical Considerations in Research.

TEXT BOOKS:

1. Research and Methodology by C.R Kothari, Gaurav Garg.
2. Research and Methodology by Ranjitkumar
3. Research Design by R.Pannerselvam

REFERENCES:

1. Case Study Research Design and Methods by Robert K. Yin
2. The Action Research Dissertation(A Guide FOR Students and Faculty)by KthrynHerr, Gary L.Anderson
3. Research Design by Jhon W.Creswell

MAJOR COMPONENTS - 29
ENTERPRISE DEVELOPMENT PROGRAMME
(Course Code:24FDVC4702)

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

Enterprise–Definition, Types of Enterprise–Sole proprietorship, Partnership, Co-operative society, Joint stock company–Definition Meaning, Functions, Objectives, roles.

Unit II

Small Enterprise :An Introductory frame work – Project Identification and selection- Project formation–Project appraisal-Legal, regulatory and statutory body-clearance approvals and NOC – compliance – Financing Enterprise – boot strapping- ownership structures.

Unit III

Organizing and Enterprise–determining activities group of activities, assigning duties, Delegating authority, coordinating activities.

Unit IV

Enterprise selection–Basic strategy, proficiency and competency, market assessment missed opportunities, poor returns and substantial financial losses.

Unit V

Accounting for Enterprise–Break even analysis–Element of financial statements-Growth strategies – Intellectual property – Innovation – Knowledge management – Leadership – governance sickness and rehabilitation – application of electronic commerce.

LECTURE SCHEDULE

No.of week (4 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">Enterprise–Definition, Types of Enterprise–Sole proprietorship, Partnership, Co-operative society, Joint stock company–Definition Meaning, Functions, Objectives, roles.
4 th to 6 th Week	<ul style="list-style-type: none">Small Enterprise :An Introductory frame work – Project Identification and selection- Project formation – Project appraisal- Legal, regulatory and statutory body- clearance approvals and NOC–compliance–Financing Enterprise–boot strapping-ownership structures.
7 th to 10 th Week	<ul style="list-style-type: none">Organizing and Enterprise – determining activities group of activities, assigning duties, Delegating authority, coordinating activities.

	<ul style="list-style-type: none"> • 8th week: Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Enterprise selection–Basic strategy, proficiency and competency, market assessment missed opportunities, poor returns and Substantial financial losses.
14 th to 16 th Week Total: 60 hours	<ul style="list-style-type: none"> • Accounting for Enterprise – Break even analysis – Element of financial statements–Growth strategies – Intellectual property – Innovation–Knowledge management–Leadership–governance Sickness and rehabilitation –application of electronic commerce.

REFERENCES

1. Hambrick, D (1982), environmental scanning and organization strategy, strategic management journal. 3(2), pp. 159-174
2. SWOT analysis: Discover new opportunities, Manage and eliminate threats. "www.mindtools.com.loop. Retrieved 24 February 2018

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

MAJOR COMPONENTS - 30
MORDERN GOODS AND GARMENTS MAKING

(Course Code:24FDVC47C1)

Credits:4+0

(CFA=40+ESE=60)

Objectives:

To enable the students to learn the Goods and Garment
To make the students understand the Recent Development in designing, cutting, Closing and Finishing.

Specific Learning Outcome:

After learning this paper the students will gain knowledge in Modern Development in Goods and Garments Industry

UNIT I

Introduction to Goods and Garment industry: Brief study of sequence of process – Planning, spreading & cutting. Marking – Definition, requirements of marker planning, methods of marker planning and computerized marker planning. Spreading – Definition, requirements of spreading process, methods of spreading, spreading machine.

UNIT II

Introduction to cutting – Definition, objective of cutting. Methods of cutting – Cutting equipment and tools - Hand shears, straight knife cutting machine, band knife cutting machine, round knife cutting machine, notches, drills & threadmarkers, computer controlled cutting machine, Laser cutting, Plasma cutting, die cutting, water jet cutting and ultrasonic cutting.

UNIT III

Sewing machine– parts and function of basic sewing machine: Needle – parts & types of needle, needle size, presser foot and its types. Classification of Industrial sewing machines: Applications and Description of working of various sewing machine - Single Needle Lock Stitch machine, Double Needle Lock Stitch machine, OverLock, Flat Lock, Bar tacking, Button hole machine, Button fixing machine, Blind stitch machine and smocking making machine. Machine bed types – flat bed, cylinder bed, post bed and feed-off-the-arm.

UNIT IV

Definition and types of stitches and seams as per federal standards. Study on various goods and garments finishing industrial machines for Fusing, stain removing, Pressing, foreign particle detecting and Packing. Colour matching- importance, computerized colour matching cabinet. Efficiency of planning of wastage and utilization.

UNIT V

Introduction to Automatic sewing machine, Automatic embroidery machine and smocking making machine. Introduction to ultra sonic stone fixing machine. Introduction to computerized pattern development, Software's used for pattern development. Introduction to digitizer plotter scanner. Grading-computerized grading and software's used for grading. E-fitting, bodyscanner, 3D simulators.

LECTURE SCHEDULE

No.of week (4hrs.perweek)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Introduction to Goods and Garment industry: Brief study of sequence of process – Planning, spreading & cutting. Marking – Definition, requirements of marker planning, methods of marker planning and computerized marker planning. Spreading – Definition, requirements of spreading process, methods of spreading, spreading machine.
4 th to 6 th Week	<ul style="list-style-type: none">• Introduction to cutting– Definition, objective of cutting. Methods of cutting – Cutting equipment and tools - Hand shears, straight knife cutting machine, band Knife cutting machine, round knife cutting machine, notches, drills & thread markers, computer controlled cutting machine, Laser cutting, Plasma cutting, die cutting, water jet cutting and ultrasonic cutting.
7 th to 10 th Week	<ul style="list-style-type: none">• Sewing machine – parts and function of basic sewing machine: Needle – parts & types of needle, needle size, presser foot and its types. Classification of Industrial sewing machines: Applications and Description of working of various sewing machine - Single Needle Lock Stitch machine , Double Needle Lock Stitch machine , Over Lock , Flat Lock , Bar tacking , Button hole machine, Button fixing machine, Blind stitch machine and smocking making machine. Machine bed types – flat bed, cylinder bed, post bed and feed-off-the-arm.<ul style="list-style-type: none">○ 8th week: Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none">• Definition and types of stitches and seams as per federal standards. Study on various goods and garments finishing industrial machines for Fusing, stain removing, Pressing, foreign particle detecting and Packing. Colour matching-importance, computerized colour matching cabinet. Efficiency of planning of wastage and utilization.

14 th to 16 th Week	<ul style="list-style-type: none"> • Introduction to Automatic sewing machine, Automatic embroidery machine and smocking making machine. Introduction to ultra sonic stone fixing machine. Introduction to computerized pattern development, Software's used for pattern development. Introduction to digitizer plotter scanner. Grading-computerized grading and software's used for grading. E-fitting, body scanner, 3D simulators.
Total:60 hours	

TEXT BOOKS

1. Fashion Design and Product Development, Harold Carrand John Pomeroy, Blackwell Science Inc, Cambridge (1992)
2. Fashion marketing, Mike Basey, Oxford University press, Wynford Drive, Don Mills, Ontario (1995).
3. Introduction to Fashion, Patrick John, BT Batsford Ltd, Ireland, Fullham road, London (1992).

REFERENCES

1. Shenai V.A, Technology of Textile processing, Chemistry of dyes and principles of dyeing, A Sevak Publication, Bombay, 1993.
2. Nalankili.G., Textile Finishing, SSM Publications, Komarapalayam.
3. Prayag.R.S., Technology of Textile Printing, L.R. Prayag.

MAJOR COMPONENTS – 31

LEATHER GOODS AND GARMENTS MANUFACTURING (P)

(Course Code: 24FDVC47C2)

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
- 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 manufacturing of coin pouch, wallet, clutch purse, card case, leather sleeve, leather placket, leather packet, leather collar, leather yoke and components of leather garments.

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
- Showcase the coin pouch.
- 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
- Showcase the wallet.

UNIT-II

- 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

- Showcase the clutch purse.
- 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
- Showcase the card case.

UNIT-III

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

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-IV

Developing of pattern for sleeve (Miniature)

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

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-V

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.

Placket-lapped seam placket, zipper plackets button-button types, button hole, button loops, shank button, snaps or press button.

PRACTICAL SCHEDULE

No.of week (4hrs.per week)	Topics covered
1 st to 3 rd Week	<p>Making of coin 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 • Showcase the coin pouch. <p>Making of wallet</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 • Showcase the wallet.
4 th to 6 th Week	<p>Making of clutch purse</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 • Showcase the clutch purse.
	<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 • Showcase the card case.
7 th to 10 th Week	<p>Making of cellphone 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

	<ul style="list-style-type: none"> • Do the finishing operations • Showcase the cellphone pouch. • Quality control inspection of leather goods • 8th week: Mid-Semester Examinations • 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
11 th to 13 th Week Total:	<ul style="list-style-type: none"> • Sleeve, • Types of sleeve, • Plain sleeve, long sleeve, • Bishop sleeve, • Puff sleeve, • raglan, • kimono, • dolman sleeve • Collar • Designing collar,
14 th to 15 th Week Total :60hours	<ul style="list-style-type: none"> • classification-cape collar, puritan collar, sailor collar, full roll convertible collar, partial roll, collar, Chinese collar, shawl collar, tailored collar • 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. • Placket–lapped seam placket, zipper plackets • button–button types, button hole, button loops, shank button, snap or press button

TEXT BOOKS:

1. Parker, Xenialey, Working with leather Charles Scribner's sons, 1972–Mary F. M. McNohy
2. Moosa, Nayeem–Process of Leather making: June 23, 2020.
3. Art of Leather Crafting–E Books.
4. Leather crafting for Beginners –E Books.
5. The bag making by me–E books.
6. Leather craft and Designing–Kindle edition.

REFERENCES

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

MAJOR COMPONENTS – 32
PRODUCTS DEVELOPMENT IN LEATHER GOODS (P)
(Course Code: 24FDVC47C3)

Credits:0+5

(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 inmaking of ladies hand bag, travel bag and executive bag.

UNIT-I

Selection of products–ladies handbag/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 Showcasing of developed products for display and sale.

PRACTICAL SCHEDULE

No.of week (5hrs.perweek)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Selection of products–ladies handbag/travel bag/executive bag • Designing and pattern making of ladies handbag/travel bag/executive bag • Cutting of ladies handbag/travel bag/executive bag • innovative goods, wealth out of waste, wall hangers, car accessories,interiordecorative pieces,wall and floor an door decorations
4 th to 6 th Week	<ul style="list-style-type: none"> • Pre–closing of ladies handbag/travel bag/executive bag • Closing of ladies handbag/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 handbag/travel bag/executive bag • Finishing of ladies handbag/travel bag/executive bag • 8thweek: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 handbag/travel bag/executive bag 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: 75 hours	<ul style="list-style-type: none"> • Costing of ladies handbag/travel bag/executive bag • Showcasing of ladies handbag/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,Textbook of footwear Manufacture,National Trade Press Book Ltd.,London, 1970.
- 2.Comprehensive footwear Technology by
S.N.GANGULY Manual of Shoe Making, Clarks Ltd.,
London, 1978.

REFERENCES:

1. Manuals from NIMI Publication
2. Manuals from CLRI

MAJOR COMPONENTS – 33
PRODUCTS DEVELOPMENT IN LEATHER GARMENTS (P)

(Course Code:24FGDVC47C4)

Credits:0+5

(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 longcoat.

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 jacketCutting ,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 (5hrs.per week)	Topics covered
1 st to 3 rd Week	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	Pre-closing of jacket/trouser/long coat Closing of jacket/trouser/long coat
7 th to 10 th Week	Fabricating of jacket/trouser/long coat Finishing of jacket/trouser/long coat 8th week: Mid-Semester Examinations
11 th to 13 th Week	Process flow chart for jacket/trouser/long coat Bill of materials for jacket/trouser/long coat
14 th to 15 th Week	Costing of jacket/trouser/long coat
Total: 75 hours	Showcasing of jacket/trouser/long coat

TEXT BOOKS:

1. Parker, Xenialey, Working with leather Charles scribners sons, 1972–Mary F. M MCNOHY
2. Moosa, Nayeem–Process of Leather making: June 23, 2020.

REFERENCES:

1. Manuals from NIMI publications
2. Manuals from CLRI

ON THE JOB TRAINING
INTERNSHIP –VII
(Course code:24FDVE47C5)

Credits:0+4

(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 or middle or End of the 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.

VIII SEMESTER
BASKET-II (LEATHER GOODS AND GARMENTS MANUFACTURING)

MAJOR COMPONENTS – 34

PRODUCT PORTFOLIO MANAGEMENT

(Course Code: 24FDVC4801)

Credits:0+4

(CFA=40+ESE=60)

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 confidence on their products developments skills –Designing , cutting, sewing , finishing.

UNIT I

Management of New Product Development Process-Managing Product Lifecycle Brands and Branding – Introduction to Products Management- Products Management Process- Products choice decisions and Models

UNIT II

Product plans elements of branding- brand identify- brand communication- brand positioning-brand image and personality-valuation of Products-Products valuation- Products choice decisions and models.

UNIT III

Marketing mix factors and products- managing Product over time- building brands in Indian market launching a new Products -revitalizing Products - branding strategies- Products extension strategies-Products portfolio management-managing Products across geographical borders.

UNIT IV

Marketing Products experience- digital Products – employment Products – co-branding- Products extension scorecard-culture and Products-Products flashbacks-future Products priorities.

UNIT V

Sale and Distribution of Products, Advertising – Products name plan- pricing systems-product distribution systems – advertising and sales promotion–product sales management-product and public relations service product marketing industrial product marketing product exports and international marketing- critical success factors in brand management.

PRACTICAL SCHEDULE

No.of week (4hrs.per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Management of New Product Development Process- Managing Product Life cycle Brands and Branding – Introduction to Products Management-Products Management Process-Products choice decisions and Models
4 th to 6 th Week	<ul style="list-style-type: none">• Product plans elements of branding- brand identify- brand communication-brand positioning-brand image and personality-valuation of Products- Products valuation- Products choice decisions and models.
7 th to 10 th Week	<ul style="list-style-type: none">• Marketing mix factors and products- managing Product over time-building brands in Indian market launching a new Products -revitalizing Products – branding strategies – Products extension strategies – Products portfolio management-managing Products across geographical borders.• 8th week:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none">• Marketing Products experience – digital Products – employment Products – co-branding- Products extension scorecard- culture and Products - Products flashbacks- future Products priorities.
14 th to 15 th Week Total:60 hrs	<ul style="list-style-type: none">• Sale and Distribution of Products,Advertising–Products name plan-pricing systems-product distribution systems-advertising and sales promotion – product sales management- product and public relations service product marketing industrial product marketing product exports and international marketing- critical success factors in brand management.

REFERENCE:

- 1.Product and Brand management by K.Panda.
- 2.Product and Brand management by U.C.Mathur.

MAJOR COMPONENTS – 35

ADVANCED ACCESSORIES DESIGNING USING OF CAD/ CAM (P)

(Course Code: 24FDVC48C1)

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 good and garments CAD operating systems. ladies' bag, Wallet, executive bag

UNIT-I :

Introduction, Principles Capabilities and Operation of graphical workstations. Central processing Unit, Graphic terminals, input/output devices, interface and storage devices, networking concepts of LAN & WAN.

UNIT-II

Digitization: 2D & 3D Coordinate extracting principles of digital and analog conversion, digital input/output processing systems. CNC devices for computer aided cutting including laser jet and water jet, computer aided manufacturing.

UNIT-III

Computerized techniques for pattern generation grading and assessment of Leather Goods and Garments patterns, consumptions calculations, pattern nesting and costing, stitching etc, through computerized techniques.

UNIT-IV

Styling –Digitization with 3D scanner, manipulation and optimization of digitized patterns use of macros. comparison, grading wizard flattening.

UNIT-V

3D visualization of dummy and styles concept of e-patterns, introduction to various style preparation.

PRACTICAL SCHEDULE

No. of week (4 hrs.per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none">• Introduction, Principles Capabilities and Operation of graphical workstations. Central processing Unit, Graphic terminals, input/output devices, interface and storage devices, networking concepts of LAN & WAN.
4 th to 6 th Week	<ul style="list-style-type: none">• Digitization: 2D & 3D Coordinate extracting principles of digital and analog conversion, digital input /output processing systems. CNC devices for computer aided cutting including laser jet and water jet, computer aided manufacturing.
7 th to 10 th Week	<ul style="list-style-type: none">• Computerized techniques for pattern generation grading and assessment of Leatehr Goods and Garments patterns, consumptions calculations, pattern nesting and costing, stitching etc, through computerized techniques.• 8th week: Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none">• Styling – Digitization with 3D scanner, manipulation and optimization of digitized last use of macros. comparison, grading wizard flattening.
14 th to 16 th Week Total: 60 hours	<ul style="list-style-type: none">• 3D visualization of dummy and styles concept to fe-patterns, introduction to various style preparation.

TEXT BOOKS:

1. Groover, M.P., and Zinimers, M.P., "CAD/CAM, Computer Aided Design and Manufacturing", Prentice Hall of India, 1984.
Newman and Sul, S.P., "Introduction to Computer Graphics, Published by Morgan Kaufmango, 1995
2. Modular employees skill textbook from NIMI

REFERENCES

1. Manuals from Software suppliers
2. Handouts

MAJOR COMPONENTS – 36
ADVANCED LEATHER GOODS AND GARMENTS MANUFACTURING (P)
(Course Code:24FDVC48C2)

Credits:0+4

(CFA=60+ESE=40)

Objectives:

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

Specific Learning Outcome:

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

UNIT-I

Making of ladies hand bag with top handle

Making of ladies handbag–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
- Showcase the hand bag.

UNIT-II

Making of school bag with double zipper

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
- Showcase the bag.

UNIT-III

Making of leatherover coat (2types)

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
- Showcase the leather jackets

UNIT-IV

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
- Showcase the waist coat and pleated trouser

UNIT-V

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
- Showcase the Biker jacket

PRACTICAL SCHEDULE

No.of week (4hrs.per week)	Topics covered
1 st to 3 rd Week	<p>Making of ladies hand bag with top handle</p> <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 • Showcase the hand bag.
4 th to 6 th Week	<p>Making of school bag with double zipper</p> <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 • Showcase the bag.
7 th to 10 th Week	<p>Making of leather over coat (2types)</p> <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

	<ul style="list-style-type: none"> • Showcase the leather jackets • 8th week: Mid-Semester Examinations
11 th to 13 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 • Showcase the waist coat and pleated trouser
14 th to 15 th Week Total: 60 hrs	<p>Making of leather Biker 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 • Showcase the Biker jacket

TEXT BOOKS:

1. Parker, Xenialey, Working with leather Charles scribners sons, 1972–Mary F. MMCNOHY
2. Moosa, Nayeem –Process of Leather making: June 23, 2020.
3. Art of Leather Crafting–E Books.
4. Leather crafting for Behinars –EBooks.
5. The bag making by me–Ebooks.
6. Leather craft and Designing–Kindle edition.

REFERENCES

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

MAJOR COMPONENTS– 37
FINISHING TECHNIQUES OF LEATHER PRODUCTS

(Course Code: 24FDVC4802)

Credits:3+0

(CFA=40+ ESE= 60)

Objectives:

To make the students understand about finishing techniques of leather products

To enable the students to gain knowledge on finishing techniques of leather products.

Specific Objective Learning:

The students understand about finishing techniques of leather products

The students to gain knowledge on finishing techniques of leather products.

UNIT I

Introduction, Basic Types of shoe Finishing, Tools used for Shoe Finishing, Material Used for shoe Finishing, Shoe Finishing Process, Uni-forming, repairing and antiquing Waxes- Cutting, Burnishing and polishing

UNIT II

Methods of Shoe Finishing

Dressing System, Spraying, Finishing Procedure for different types of Leather, Post finishing – treating non leather uppers

UNIT III

Problems with dressings

Repair and renovation on finishing, Causes of repairs works

Auxiliary operation

Testing shoeroom finishes

UNIT IV

Bottom Finishing- Sequence of operation for Heel finish, basic operation of sole finish, faults of finishing, quality check point.

Formulation of polymeric materials such as shoe polishes, upper dressings, glazing materials, lacquers, binders, resins - Properties and their application in footwear industry. Manufacture of shoe finishes.

UNIT V

Finishing operation of leather goods & garments Determine requirements for repair of leather goods & garments Prepare leather goods & garments for repair work

LECTURE SCHEDULE

No.of week (3hrs.per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> • Introduction,Basic Types of shoe Finishing,Tools used for Shoe Finishing, Material Used for shoe Finishing, Shoe Finishing Process, Uni-forming, repairing and antiquing Waxes- Cutting, Burnishing and polishing
4 th to 6 th Week	<ul style="list-style-type: none"> • Methods of Shoe Finishing • Dressing System,Spraying,Finishing Procedure for different types of Leather • Post finishing–treating non-leather uppers
7 th to 10 th Week	<ul style="list-style-type: none"> • Problems with dressings • Repair and renovation on finishing,Causes of repairs works • Auxiliary operation • Testing shoeroom finishes • 8thweek:Mid-Semester Examinations
11 th to 13 th Week	<ul style="list-style-type: none"> • Bottom Finishing- Sequence of operation for Heat finish, basic operation of sole finish, faults of finishing, quality check point. Formulation of polymeric materials such as shoe polishes, upper dressings, glazing materials,lacquers, binders, resins - Properties and their application in footwear industry. Manufacture of shoe finishes.
14 th to 16 th Week Total: 45 hours	<ul style="list-style-type: none"> • Finishing operation of leather goods & garments Determine requirements for repair of leather goods & garments Prepare leather goods & garments for repair work

TEXT BOOKS:

1. Textbook of footwear manufacture by J.H.Thornton
2. Comprehensive Footwear Technology by S.N.Ganguly.

REFERENCES:

1. J.H. Thornton, Textbook 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, 1978

MAJOR COMPONENTS – 38
PROFESSIONAL PORTFOLIO-WORK PORTFOLIO (P)
(Course Code:24FDVC48C3)

Credits:0+5

(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 not try 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 confidence in their product development skills – Designing , cutting, sewing , lasting and finishing.

Units

Product Development - theme

Unit-I

- Idea generation-quick initial doodles, sketches and thought process.
- Development to find evidence of individual thinking.

Unit-II

- An interest in footwear and fashion and product design.
- Men's
- Kids
- Women's

Unit-III

- Fashion and Sports-Technical Athletic and Team Sports
- Indoor/Outdoor-Hiking, workwear and Sleepers

Unit-IV

- Back to school
- Beach footwear

Unit-V

- Constructions, Seams, Edge treatment specifications—Trend forecast
- Trim and hand wear
- Street Fashions
- Costing and Importance of Branding and brand creation process. Professional Profile creation in LinkedIn, Resume and covering letter preparation and job interview preparation techniques.

PRACTICAL SCHEDULE

No.of week (5 hrs. per week)	Topics covered
1 st to 3 rd Week	<ul style="list-style-type: none"> Ideageneration-quick initial doodles ,sketches and thought process. Developmen to fide as-Evidence of individual thinking.
4 th to 6 th Week	<ul style="list-style-type: none"> An interest in footwear and fashion and product design. Men"s Kids Women"s
7 th to 10 th Week	<ul style="list-style-type: none"> Fashion and Sports-Technical Athletic and TeamSports Indoor/Outdoor-Hiking, workwear and Sleepers
11 th to 13 th Week	<ul style="list-style-type: none"> Back to school Beach footwear
14 th to 15 th Week Total:75hrs	<ul style="list-style-type: none"> Constructions,Seams,Edge treatment specifications–Trend forecat Trim sandhard wear Street Fashions Costing and Importance of Branding and brand creation process. Professional Profile creation in LinkedIn,Resume and covering letter preparation and job interview preparation techniques.

REFERENCES

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

INTERNSHIP-VIII / DISSERTATION

(Course Code: 24FDVE48C4)

Credits:0+10

(CFA=60+ESE=40)

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.

MULTI DISCIPLINARY-I
LIFE STYLE ACCESSORIES DESIGNING
(Course Code : 24FDVM1101)

Credits:2+0

(CFA=50)

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, trickle down 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. Gastrulaslaw and its importance in design. Semiotics in design, Brain storming method of idea generation.

UNIT- V

Understanding the consumer needs 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. Parker, Xenialey, Working with leather Charlesscribnerss, 1972–Mary F. M MCNOHY
2. Moosa, Nayeem–Process of Leather making: June 23, 2020.
3. Art of Leather Crafting–E Books.
4. Leather crafting for Behinars –EBooks.
5. The bag making by me–Ebooks.
6. Leather craft and Designing–Kindle edition.

REFERENCES

4. Manual from NIMI Publications
5. Manual from CLRI
6. Manual from FDDI

MULTI DISCIPLINARY-II

Leather Footwear Making

(Course Code :24FDVM1102)

Credits:0+3

(CFA=40 + ESE =60)

Objectives:

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

Specific Learning Outcome:

After learning this paper the students will gain knowledge in developing and preparing of upper, lining shell and sectional patterns.

Unit-I

Introduction to Leather and Footwear, Basics of Footwear design, Identifications of Designing Tools, Sketching and rendering of various Footwear designs.

Unit-II

Knife preparations, Cutting practice–paper-chart, Last selection & Identification of parts, Masking, Mean- forme preparation, W Standard preparations.

Unit-III

Model selection, Derivation of- Upper base, Upper shell, Upper components, Lining shell and components of selected models. Making of Paper mock footwear.

Unit-IV

Pre-training operations in preclosing and closing, Stitching of components, Upper and lining preparations, Upper finishing and quality checking.

Unit-V

Lasting principles, Hand lasting operations, Adhesive applications, Upper and bottom attaching, Finishing and quality checking, Packing and showcasing.

Text Books:

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

REFERENCES

1. Modern shoemaking –SATRA
2. Manual of shoemaking– Clarks
3. Swamsiddha manual by FDDI

MULTIDISCIPLINARY-III

OpenFootwearMaking

(CourseCode :24FDVM1201)

Credits:0+3

(CFA=40 + ESE =60)

Objectives:

- Toenable thestudents todesigning&patternmakingof footwear
- Tomakethe studentsunderstand the stepsinvolvedin footwear designing

SpecificLearningOutcome:

After learning this paper the students will gain knowledge in developing and preparing of upper and bottom components.

Unit-I

Introduction to Leather and Footwear, Basics of Footwear design, Identifications of Designing Tools, Sketching and rendering of various Footwear designs.

Unit-II

Knife preparations, Cutting practice–paper-chart, Last selection & Identification of parts, Masking, Mean- forme preparation, W Standard preparations.

Unit-III

Model selection-V Strap Chappal, Derivation of-Upper components, Bottom components. Making of Paper mock footwear. Introduction to various Bottom Materials.

Unit-IV

Strap Selection,Bottom Selection, Dies identification,Sizing analysis,Defect Identification and Marking.

Unit-V

Machine Identification for cutting, setting of Machine,a ssorting of materials to be cut, Cutting execution, Raw edge marking and buffing, strap insertion, Finishing and quality checking, Packing and showcasing.

Text Books:

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

REFERENCES

1. Modern shoemaking –SATRA
2. Manual of shoemaking– Clarks
3. Swamsiddha manual by FDDI

MULTI DISCIPLINARY–IV Leather Goods Making

(Course Code :24FDVM1202)

Credits:0+3

(CFA=40 + ESE =60)

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 selected types of ladies hand bags.

Unit–I

Introduction Leather and Leather goods, Sketching and rendering of various goods designs, Designing tools and their uses. Safety precautions in leather goods making.

Unit-II

Introduction to cutting closing and Assembling and finishing of Leather goods. Pre-training operations in cutting,Knife preparations,Cutting practice – paper- chart- synthetic-leather.

Unit–III

Designing and pattern making of leather goods–model selection,Upper and Lining pattern generations. Develop a working pattern and Marking patterns

Unit-IV

Construct the Basic pattern, Develop working and cutting patterns,Test patterns and complete work, Create prototype. Pre-training operations in pre closing and closing.

Unit–V

Upper and lining preparations, prefabrication process–skiving, edge coloring, trimming and checking.Stitching of components, Upper finishing and quality checking. Showcausing and costing of the leather goods.

Text Books:

1. Parker,Xenialey,Working with leather Charlesscribnerssons,1972 –MaryF.M MCNOHY
2. Moosa,Nayeem–Process of Leather making:June 23,2020.
3. Art of Leather Crafting –EBooks.
4. Leather crafting for Behinars –EBooks.
5. The bag making by me–Ebooks.
6. Leather craft and Designing–Kindleedition.

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publication

MULTI DISCIPLINARY–III

CAD for Footwear (Course Code :24FDVM2301)

Credits:0+3

(CFA=40 + ESE =60)

- 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 style to another.

UNIT-I

Layout 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:

- Editor add digitized lines, if necessary
- Add off set lines for different allowances, variable off set 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

Text Books:

5. Manual of shoe designing by Md. Sadique Principal scientist clri Chennai.
6. Training Manual: Procam for Dimension 6.1
7. Training Manual : shoemaster Qs 10.4
8. Training Manual : Delcam Crispin

REFERENCES

3. Manuals from Software suppliers
4. Handouts

MULTI DISCIPLINARY–VI
LEATHER GARMENTS MAKING
(Course Code :24FDVM2302)

Credits:0+3

(CFA=40 + ESE =60)

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 jacket.

UNIT-I

Sketching of Jackets with sleeves

Raglan,
Drop shoulder,
Tailor,
Simple sleeve,
kimono sleeve

UNIT-II

Sketching of Jackets with Collars

Chinese
Mandarin
Shawl
Notched
Simple collar

UNIT-III

Identification and Selection of Jackets
Measurements
Developing of pattern
Front bodice
Back bodice
Sleeve

UNIT-IV

Pattern making for leather garments
Assembling of Patterns
Developing of Jacket(Paper Mock)

UNIT-V

Introduction to Stitching Room
Constructions
Making of Jackets.
Attach hoodie
Attach zip and ornamentation
Quality checking and Packing

Text Books:

1. Parker, Xenialey, Working with leather Charles scribners sons, 1972–Mary F. M MCNOHY
2. Moosa, Nayeem–Process of Leather making: June 23, 2020.

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

**THE GANDHIGRAM RURAL INSTITUTE
(DEEMED TO BE UNIVERSITY)
GANDHIGRAM
DEEN DAYAL UPADHYAY-KAUSHAL KENDRA**

Local/University Skill Assessment

I.Nominees from GRI will be

- | | |
|--|-----------|
| 1. Vice-Chancellor
Gandhigram Rural Institute Deemed to be University
Gandhigram | -Chairman |
| 2. Dr.R.I.Sathya
Professor & Director
DDU - KK
Gandhigram Rural Institute Deemed to be University
Gandhigram | -Convener |

External Industry based/subject experts will be,

I. Central Leather Research Institute-Chennai

- | | |
|--|---------|
| 1. S.Mathivanan
Senior principal scientist
Shoe and Leather product development centre
Central leather research institute
Adyar,Chennai-24 Ph:9840395615 | -Member |
| 2. K.Krishnaraj
Principal scientist
Shoe and Leather product development
centre, Central Leather Research Institute,
Adyar,Chennai-24 | -Member |
| 3. D.Sureshkumar
Scientist
Shoe and Leather product development centre
Central Leather Research Institute
Adyar,Chennai-24 ph:9790920258 | -Member |

II. Central Footwear Training Institute-Chennai

1. A.Kolaniijivel -Member
Deputy Director
Central Footwear Training Institute
65/1,GSTroad,Guindy,Chennai-32
Ph:9444173934
2. J.Madav -Member
Junior Technical Officer
Central Footwear Training Institute
65/1,GSTroad,Guindy,Chennai-32

III. National Institute of Fashion Technology-Chennai

1. Dr.M.Aravendan -Member
Professor
Leather design department
National Institute of Fashion
Technology, Rajeev Gandhi salai,
Taramani, Chennai-113
ph:9003826896
2. T.P.Balachandar -Member
Assistant Professor
Leather Design Department
National Institute of Fashion Technology
Rajeev Gandhi salai, Taramani
Chennai-113ph:9677671265

IV. Institute of Leather Technology-Chennai

1. S.Ponsubbaiah -Member
HOD
Institute of leather technology
CITcampus,Rjiv Gandhi salai,
Taramani,Chennai-113ph:9840114790

V. Footwear Design and Development Institute-Chennai

1. K.Dinesh -Member
Centre Incharge
Footwear design and development institute
Plot no:E1
Sipcot industrial park
Irungattukottai,kanchipuram-602117
Ph:9940410246

VI. Ministry of micro,small and medium enterprises-DI,Chennai-32

1. Er.R.Senthilkumar -Member
DeputyDirector
MSME-DI
GSTRoad,Guindy
Chennai-32
Ph:9445547991

VII. Industrialist

1. S.Seenuprasad, -Member
Managing Director,Wellshineimpex
Ranipet, vellore
Ph:9942794666
2. M.Senthilkumar -Member
Senior Manager-QASouthIndia
Product Development and CSR–Coordinator
Diechmann International Business Service India Pvt Ltd,
Ph:8148967677