

B.VOC
(FOOTWEAR AND ACCESSORIES DESIGN)

SYLLABUS

(with effect from June 2015)



KAUSHAL KENDRA

The Gandhigram Rural Institute – Deemed University
Gandhigram – 624 302 Tamil Nadu

THE GANDHIGRAM RURAL INSTITUTE – DEEMED UNIVERSITY
DEPARTMENT OF HOME SCIENCE
DEEN DAYAL UPADHYAY – KAUSHAL KENDRA
Scheme of Syllabus for B.Voc. Footwear and Accessories Design

	Course Code	Title of the course	Total contact Hours			CFA	ESE	TOTAL
			Credit	Theory	Practical			
I Semester								
General Components	15FADV0101	Communication skills -1	3+1	3	1	40	60	100
	15FADV0102	(Bridge course) Science / Mathematics/Accountancy	4+0	4	-	40	60	100
	15FADV0103	Material science	3+0	3	0	60	40	100
Total			12	10	1	-	-	300
Skill Based Components	15FADV0104	Introduction to Leather and Manufacturing Leather products	4+0	4	--	40	60	100
	15FADV0105	Sketching& Rendering - I	0+3	0	3	60	40	100
	15FADV0106	Pre-training operations in cutting and pre closing	0+4	-	4	60	40	100
	15FADV0107	Pre-training operations in stitching	0+4	-	4	60	40	100
	15FADV0108	Elements and Methodology of Design	1+1	1	1	60	40	100
	15FADV0109	Internship –I	0+2	-	2	50	-	50
Total			18	5	14	-	-	550
Grant Total			30					850

II Semester								
General Components	15FADV0210	Environmental Science	3+1	4	--	40	60	100
	15FADV0211	Introduction to Computer Application	1+2	1	2	60	40	100
	15FADV0212	Machines & Maintenance	2+2	2	2	40	60	100
	15YOGV0001	Yoga	0+1	0	1	40	60	100
Total			12	7	5	-	-	300
Skill Based Components	15FADV0213	Basics of cutting ,closing and lasting(t)	4+0	4	--	40	60	100
	15FADV0214	Cutting techniques for leather products	1+3	1	3	60	40	100
	15FADV0215	Pre assembling operations for leather products	1+3	1	3	60	40	100
	15FADV0216	Stitching of components for leather products	1+3	1	3	60	40	100
	15FADV0217	Internship – II	0+2	-	2	50	-	50
Total			18	7	11	-	-	550
Grant Total			30					850

III Semester

General Components	15FADV0318	Business Communication	4+0	4	--	40	60	100
	15FADV0319	Sketching& Rendering - II	0+4	0	4	60	40	100
	15FADV0320	Principles of marketing	4+0	4	-	40	60	100
Total			12	8	4	-	-	300
Skill Based Components	15FADV0321	Foot anatomy & solid modelling	4+0	4	-	40	60	100
	15FADV0322	Footwear manufacturing-I	1+3	1	3	60	40	100
	15FADV0323	Leather goods manufacturing-I	1+3	1	3	60	40	100
	15FADV0324	Leather garments manufacturing -I	1+3	1	3	60	40	100
	15FADV0325	Internship III	0+2	-	2	50	-	50
Total			18	7	11	-	-	450
Grant Total			30					750

IV Semester

General Components	15FADV0426	Industrial Management	4+0	4	--	40	60	100
	15FADV0427	International marketing	4+0	4	-	40	60	100
	15FADV0428	Production and operations management	4+0	4	--	40	60	100
Total			12	12	-	-	-	300
Skill Based Components	15FADV0429	Material testing	3+1	3	1	40	60	100
	15FADV0430	Footwear manufacturing-II	1+3	1	3	60	40	100
	15FADV0431	Leather goods manufacturing-II	1+3	1	3	60	40	100
	15FADV0432	Leather garments manufacturing -II	1+3	1	3	60	40	100
	15FADV0433	Internship IV	0+2	-	2	50	-	50
Total			18	6	12	-	-	450
Grant Total			30					750

V Semester								
General Components		ELECTIVE	0+4	-	4	60	40	100
	15FADV0534	Shoe CAD	1+3	1	3	60	40	100
	15FADV0535	CAD for leather goods & Garments	1+3	1	3	60	40	100
Total			12	2	10	-	-	300
Skill based components	15FADV0536	Designing & Pattern making of footwear -I	1+3	1	3	60	40	100
	15FADV0537	Designing & Pattern making of leather goods-I	1+3	1	3	60	40	100
	15FADV0538	Designing & Pattern making of leather garments -I	1+3	1	3	60	40	100
		ELECTIVE	2+0	2	-	40	60	100
	15FADV0539	Portfolio	0+2	-	2	60	40	100
	15FADV0540	Internship – V	0+2	-	2	50	-	50
	Total			18	5	13	-	-
Grant Total			30					750

VI Semester								
General Components	15FADV0641	Entrepreneurship Development	4+0	4	-	40	60	100
	15FADV0642	Occupational Health and safety for footwear and accessories	4+0	4	-	40	60	100
	15FADV0643	Costing of leather products	4+0	4	-	40	60	100
Total			12	12	-	-	-	300
Skill Based components	15FADV0644	Designing & Pattern making of footwear -II	1+3	1	3	60	40	100
	15FADV0645	Designing & Pattern making of leather goods-II	1+3	1	3	60	40	100
	15FADV0646	Designing & Pattern making of leather garments -II	1+3	1	3	60	40	100
	15FADV0647	Project Work.	0+6	-	6	100	--	100
	Total			18	3	15	-	-
Grant Total			30					600
Final Total			180					4550

ELECTIVES for 15FADV05EX & 15FADV05EY

15FADV05E1	Illustrations of leather products (P)	0+4	-	4	60	40	100
15FADV05E2	Finishing techniques of leather products (T)	3+0	3	-	40	60	100
15FADV05E3	Speciality Footwear - Safety Footwear (T)	4+0	4	-	40	60	100
15FADV05E4	Life Style Accessories Designing (T)	4+0	4	-	40	60	100
15FADV05E5	Advanced Shoe Styling & Designing Using Of CAM / CAD (P)	2+2	2	2	60	40	100
15FADV05E6	Footwear Retailing (T)	4+0	4	-	40	60	100
15FADV05E7	Sports Shoe Manufacturing Technology (T)	4+0	4	-	40	60	100

GENERAL EDUCATION

COMMUNICATION SKILL-I (Course Code: 15FADV0101)

Credits: 3 + 1

(CFA=40+ ESE= 60)

OBJECTIVES:

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

SOL (Specific Objective Learning):

- Students know about importance of basic communication skills
- Students can be listening, reading, writing and speaking skills.)

UNIT – I

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

UNIT – II

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

UNIT – III

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

UNIT – IV

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

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

UNIT – V

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

REFERENCES

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

(BRIDGE COURSE) SCIENCE / MATHEMATICS / ACCOUNTANCY

(Course Code: 15FADV0102)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students of Science and arts streams to learn the foundations of math's paper
- To enable the students of Math's to learn the foundations of Accounting principles

SOL (Specific Objective Learning):

- Enable the students of Science and Arts streams to learn the foundations of math's paper.
- To enable the students of Math's to learn the foundations of Accounting principles
- Enable the students of Science and Arts streams to learn the foundations of math's paper

UNITS:

Mathematics

- Sets and Functions: Introduction - Properties of operations on sets , De Morgan's laws-verification using examples, Venn diagrams, Formula for $n(A, B \cap C)$ v. Functions
- Sequences and Series of Real Numbers: Introduction, Sequences, Arithmetic Progression (A.P) , Geometric Progression (G.P) , Series
- Algebra solving linear equations - Polynomials, Synthetic division, Greatest Common Divisor (GCD) and Least Common Multiple (LCM), rational expressions, Square root, Quadratic Equations
- Matrices: Introduction - Types of matrices, Addition and subtraction, Multiplication, Matrix equation, Coordinate Geometry Basic proportionality theorem. Similar triangles, Triangles.
- Mensuration, Graphs: Introduction - Quadratic graphs , Some special graphs

Science

- Living cells, Bio molecules, Enzymes, Proteins, Minerals
- Biochemical techniques
- Solutions, Chemical Reactions, Periodic Classification of Elements , Carbon and its
- Compounds.
- Atoms and Molecules, Measuring Instruments
- Conservation of Environment, Waste Water Management

Accountancy

- Basic Accounting Procedures I – Double Entry System of Book-Keeping Double entry system – Account – Golden rules of accounting. Journal, Ledger, Subsidiary books, Cash Book
- Subsidiary Books III – Petty Cash Book Meaning – Imprest system – Analytical petty cash book – Format – Balancing of petty cash book – Posting of petty cash book entries – Advantages.
- Trial Balance and Rectification of Errors
- Capital and Revenue Transactions
- Final Accounts – Trading account – Profit and loss account – Balance sheet – Preparation of Final Accounts.

REFERENCES

1. June Haighton, Bridget Phillips, Veronica Thomas, Debbie Holder, Maths: The Basic Skills, Nelson Thornes, 2004.
2. Alan Tussy, R. Gustafson, Diane Koenig, Basic Mathematics for College Students, Cengage Learning, 2010.
4. Richard Aufmann, Vernon C. Barker, Joanne Lockwood, Basic College Mathematics: An Applied Approach, Student Support Edition, *Available 2010 Titles Enhanced Web Assign Series*, Cengage Learning, 2007
5. Carol Leth Stone, The Basics of Biology, *Basics of the hard sciences*, Greenwood Publishing Group, 2004
6. Alison Snape, Despo Papachristodoulou, William H. Elliott, Daphne C. Elliott, Biochemistry and Molecular Biology, OUP Oxford, 2014
7. R. K. Sharma, Basic Techniques in Biochemistry and Molecular Biology, I. K. International Pvt Ltd, 2008
8. Practising Law Institute, Basics of Accounting & Finance, *Corporate law and practice course handbook series*, Practising Law Institute, 2005
9. Donatila Agtarap-San Juan, Fundamentals of Accounting: Basic Accounting Principles Simplified for Accounting Students, AuthorHouse, 2007
10. Nishat Azmat, Andy Lymer, Basic Accounting: The step-by-step course in elementary accountancy, *Teach Yourself*, Hachette UK, 2010

MATERIAL SCIENCE

(Course Code: 15FADV0103)

Credits: 3 + 0

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The students understand about Leather products materials
- The students gain knowledge on Leather products materials

UNIT I

Characteristics & Properties of different types of leather, and where to be cut, Leather defects.

Introduction to Footwear components-types of foot wear components. Detailed description of various components of footwear

Insoles – types of insoles, properties of insole, requirements of a basic insole, fixing insole Layout, Insole materials, Insole manufacturing process of various Insoles, Quality check pint of Insole, Costing of Insole. Insole: Raw material - Kind of insoles: Leather Board of stock preparation - Board making

Shank and its Types, Properties, Shank Material, Manufacture Techniques

UNIT II

Bottom component – Sole – types of soles, Requirements of soles, Types of soling materials and their properties.

Sole manufacturing machinery – different types of sole manufacturing machines, parts and functions of sole manufacturing machines, Leather Sole – types of leather soles, grading of leather soles, leather unit sole manufacturing process

Introduction to moulding - direct injection moulding, direct pouring, direct vulcanizing, Sole manufacturing process - PVC, PU, TPR, Rubber, EVA, TPU, TPE, Nitrile Rubbers etc.

UNIT III

Heel – definition, types of heels, production process of various types of heels - VT leather, PVC, PU, TPR, Rubber, EVA, TPU, TPE, Nitrile Rubbers etc. Heel: Injection moulded heels: mould design, raw materials selection - injection moulding and finishing

Finishing materials – Cleaners, finishers, fillers and dressing their suitability and use for uppers and bottoms, decorative sprays, waxes and its applications

UNIT IV

GRINDERIES AND CHEMICALS

Last: Raw material - Manufacture of wooden last, Plastic last and metal last. Constituents and Manufacture of fibre boards. Plastic back part insole and stiffener board. Shank, Raw Material - Wood, Fibre board Steel, combined wooden board or steel and board, manufacture technique. Adhesive: Types of adhesives used in shoe making, raw materials - formulation and manufacture. Grinderies: Metallic grinderies - tack, rivet and nails, wires - raw materials - sorting and polishing.

FASTENERS - Threads, Lace Fabrics: Raw Material – Manufacture Technique and Finishing. Eyelets: Raw materials - designing and manufacturing processes. Slide fasteners: Types of materials used in slide fasteners - manufacturing processes.

UNIT V

ACCESSORIES

Ornaments, embellishments, studs, methods of manufacture, moulding, electroplating and polishing.

REINFORCEMENTS

Toe-puff and Stiffeners: Types of Toe-puff and stiffeners, manufacture techniques - Paint on liquids, impregnated fabrics, print on hot-melt resin, filmic. Recommended use. Non-metallic grinderies: Reinforcement tape - tape preparation - Vulcanization of adhesive. Fibre fastening, Velcro, etc.

REFERENCES

1. Moulded and bottoming By K.Shooter
2. Leather Processing & Tanning Technology Hand Book by Ajay Kr Gupta NIIR Kamalanagar, New Delhi
3. Comprehensive Footwear Technology By S. N Ganguly
4. Technology and employment in Footwear Technology by Gerard Karen
5. Thornton, J.H., “Text book of Footwear Materials”, The National Trade Press Ltd., London, 1970.
6. Harvey, A.J., “Footwear Materials and Process Technology”, N.Z. Leather & Shoe Research Association, New Zealand, 1982.

SKILL BASED COMPONENTS

INTRODUCTION TO LEATHER AND MANUFACTURING LEATHER PRODUCTS

(Course Code: 15FADV0101)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

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

SOL (Specific Objective Learning):

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

UNIT – I

Hides and Skins – Classification, Distribution and Availability, Anatomical structure of hides and skins, Chemical composition and constituents of hides and skins. Properties of Hides and Skins. Defects of Hides and Skins- Anti and Post mortem defects. Curing & preservation: methods of curing of hides & skins. Merits & demerits of each methods

UNIT – II

Pre-tanning Operations: Principles & objectives involved in- a) Soaking b) Liming c) De-liming d) Bating e) Pickling f) De-pickling. Tanning – Introduction to various Tanning materials – Chrome, Vegetable and other mineral and synthetic Tanning Agents, Process of Chrome Tanning, Vegetable Tanning and other Tanning process

UNIT – III

Post Tanning Operations – Neutralization, Re-Tanning, dyeing, Fatliquoring, Fixing, Drying operations, Objectives and processing methods. Finishing – Objectives of Finishing, Classification and types of finishing, finishing machineries, Finishing process. Different Types of Leathers and their properties.

UNIT –IV

Introduction to leather goods - products classifications, types of constructions, process flow for different types of leather goods, Machineries used for leather goods manufacture, Materials used in leather goods.

UNIT – V

Introduction to leather garments - products classifications, types of constructions, process flow for different types of leather garments, Machineries used for leather garments manufacture, Materials used in leather garments.

REFERENCES

1. CLRI – publications
2. Swam siddha manual by FDDI
3. CLRI Publications
4. National and International leather journals
5. “Manual of Shoe Making” – Clarks Ltd. (London) 1978. 5. Wilhelm, A., “Tips for shoe production” Vol. I, II & III, Huthig Buch Verlag, Heidelberg, 1988.
6. S. S. Dutta, Introduction to the principles of leather manufacture, Indian Leather Technologies Association, Calcutta, 1980.
7. K.T. Sarkar, Theory and Practice of Leather Manufacture.
8. CLRI Publications

SKETCHING AND RENDERING - I

(Course Code: 15FADV0102)

Credits: 0 + 3

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The provide opportunity for skill development in sketching accessories.
- Impart knowledge on fashion accessories and creativity.

UNIT- I

Identify basic design styles

Rendering Techniques - Pencil, Steadler and Color Pencil, Charcoal. Fabric Rendering 10 Samples of Different Varieties of Fabric.

Drawing Accessories on different surfaces

2 Dimensional drawing of accessories – drawing using dimensions and measurements

3 Dimensional drawing of accessories – drawing different perspectives

UNIT-II

Use template to draw sketches

Perform rendering

Obtaining and observing drawing for rendering operation

Identification and selection of appropriate rendering techniques- Spraying, Brushing

Rendering mediums- Water color, Pencil color and Oil color

Creating components using rendering techniques and mediums –Texture, Volume, Light and shade effects

Draw and render materials and accessories – fittings & fasteners

UNIT- III

Drawing of Footwear

Mens – Casual Shoes, formal shoes, flipflops, sandals, sports shoes, boots.

Womens – Boots, Floaters, gladiators, mojaris, heels, wedges, sandals, bellies, flipflops

Children – Shoes, flipflops, sandals

UNIT-IV

Drawing men's accessories:

Wallets, Belts, suspenders, socks, card holders, key chains, hats 7 caps, head wraps, necktie, cufflinks, cravats, handkerchiefs, pocket squares, muffler, umbrella, stoles and scarves.

Drawing women's accessories:

Wallets, Belts, socks & stockings, suspenders, neckties, hair accessories, mufflers, hats & caps, head wraps, cufflinks, umbrellas, cravats, handkerchiefs, stoles & scarves

UNIT-V

Drawing bags

Travel bags, Ladies hand bags

REFERENCES

1. "Quick style", by- Christine Kunzerlman.
2. 1000 Ideas by fashion designers Carolina Cerime
3. 150 Beaded & motifs Kenneth D King
4. 21st Century Jewellery Mrthe Le Van
5. Accessories options : Shrugs scaxues stoles
6. Bead Fantasies 2 – More beautiful easy to make jeweler Takako Sanejima

PRE-TRAINING OPERATION IN CUTTING AND PRE-CLOSING

(Course Code: 15FADV0103)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The students understand about Pre training Operation in Cutting and Pre Closing.
- The students to gain knowledge on Pre training Operation in Cutting and Pre Closing

UNITS:

Cutting and Clicking - Introduction, Materials, Machines, Safety precautions

- Tools classification and drawing of tools, cutting knives preparation,
- Manual Cutting Using Knives – Paper Cutting Exercise, Synthetic Cutting Exercise
- Basic operations instruction / Handling in cutting machines – swing arm cutting machine, travel head cutting machine, strap cutting m/c, spiral cutting m/c
- Drawing of Hides, Sides, Skins, Layout preparations, nesting.
- Practising & identifications of Defects on various leathers.
- Handling of Machines & Materials
- Cutting of leather / Non leather Materials using manual / machines
- Cutting of bottom stock components

Pre Closing – Introduction, Machines and their parts, Materials used in pre – closing, Handling / practicing of Splitting, skiving m/c & operations, Stamping m/c, Embossing m/c, fusing m/c, seam press m/c, edge inking m/c, Various seam preparations, Edge treatment practice, Attaching & folding practice, etc.

REFERENCES

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

PRE-TRAINING OPERATIONS IN STITCHING

(Course Code: 15FADV0104)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The students understand about Pre training Operation in Stitching.
 - The students to gain knowledge on Pre training Operation in Stitching
1. Introduction about Sewing -
 - a) Machines and their parts
 - b) Materials used in pre – closing /closing sections
 - c) Threading
 - d) Needle fixing/ replacing
 - e) Bobbin fixing/ replacing & winding
 - f) Safety precautions
 2. Pedalling & pedal Adjustment and controlling of sewing machines
 3. Drawing of Sewing machines and needles, Stitches –Lock and Chain stitch,
 4. Stitching practice with Stitching card (paper) Exercise : 1 to10
 5. Various seam preparations
 6. Edge treatment practice
 7. Attaching & folding practice
 8. Stitching practice with leather (upper)
 9. Stitching practice with lining leather
 10. Stitching practice with non leather
 11. Other machines in stitching– Embroidery, zig zag, Thermofolding, eyeletting, etc

REFERENCES

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

ELEMENTS AND METHODOLOGY OF DESIGNS

(Course Code: 15FADV0105)

Credits: 1 + 1

(CFA=60+ ESE= 40)

Objectives:

- To make the students understand about elements and methodology of designs.
- To enable the students to gain knowledge on elements and methodology of designs

SOL (Specific Objective Learning):

- The students understand about elements and methodology of designs.
- The students to gain knowledge on elements and methodology of designs

UNITS:

Create compositions using elements and basic design principles

Elements of designs- Line, Shape, Point and Form

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

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

Depicting moods through basic elements of design- Masculine and Feminine

Identify color as an element of design

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

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

Shade scale preparation according to color mixing principles

Relationship of color theory to design process identification

Identify visual effects of color

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

Perform design process

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

Identifying and analyzing Structure and context building

Influence of material for effective design process

Commercial considerations in producing a design

REFERENCES

1. “Quick style”, by- Christine Kunzerlman.
2. 1000 Ideas by fashion designers Carolina Cerime
3. 150 Beaded & motifs Kenneth D King
4. 21st Century Jewellery Mrthe Le Van
5. Accessories options : Shrugs scaxues stoles
6. Bead Fantasies 2 – More beautiful easy to make 14eweller Takako Sanejima

INTERNSHIP-I

(Course code: 15FADV0106)

Credits: 0+2

(CFA=50)

SOL (Specific Objective Learning):

Based on the theory discussed in first semester, all students placed in field exposure during semester break. After successful completion of a field visit in textile manufacturing units and processing units the student will have a complete commercial knowledge on textiles, and also on the latest machineries and equipments.

Field Visit:

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

SEMESTER – II
ENVIRONMENTAL SCIENCE
(Course Code: 15FADV0204)

Credits: 3 + 1

(CFA=40+ ESE= 60)

Objectives:

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

SOL (Specific Objective Learning):

- The knowledge on environmental and natural resources.
- The impact of pollution, social issues and disaster management.
- The brief knowledge on Eco system and its functions.

Unit – I

Natural Resources – Introduction to Environment and natural resources – definition, scope, and importance. Forest resources – uses and over exploitation of forest resources and its impact on forest and tribal people. Water resource – uses and over exploitation of water resource and its impact. Land resource – land degradation, soil erosion and desertification. Food resource – effects of modern agriculture, fertilizer, pesticides and their problems. Energy resource – growing energy, needs, renewable and non-renewable energy, sources, uses of alternative energy sources.

Unit – II

Eco system and bio diversity – concept of an eco system, structure and functions of eco system, energy flow in the eco system, food chain, food webs and Ecological pyramid. Types of eco system – bio diversity – genetic, species and eco system diversity, India as a mega diversity Nation, threats to bio diversity – Habitat loss, poaching of wild life, man wild, life conflicts, endangered and endemic species of India, conservation of biodiversity – In-situ and Ex-situ conservation of bio diversity.

Unit – III

Environment pollution – causes, efforts and control measures – air pollution, water pollution, soil pollution and noise pollution, nuclear hazards, solid waste management and global environmental problems.

Unit – IV

Social issues and the environment – sustainable development, rural urban problems related to environment, water management and rain water management harvesting, environmental ethics – issues and possible solutions, environmental protection policies, acts and legislation, pollution and the environment. Environment and population concern – environment and human health, environmental education at various levels, HIV/AIDS, Women and child welfare, gender Issue, gender equity, institutions for gender studies and research.

Unit – V

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

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).
4. Cunningham, W.P.Cooper, T.H. Gorhani, E & Hepworth, M.T.2001, Environmental Encyclopedia, Jaico Publ. House, Mumbai, 1196p. 6. De A.K., Environmental Chemistry, Wiley Eastern Ltd.

INTRODUCTION TO COMPUTER APPLICATIONS

(Course Code: 15FADV0205)

Credits: 1 + 2

(CFA=60+ ESE= 40)

OBJECTIVES:

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

SOL (Specific Objective Learning):

- The basic computer knowledge to the students.
- The students in knowledge on computer hardware and software skills.
- The students of impart MS Office knowledge.

UNIT – I

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

UNIT – II

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

UNIT – III

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

UNIT – IV

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

UNIT – V

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

REFERENCES

1. Sanjay Saxsena, “A First Course in Computer”, Vikas Publishing House, 2000.
2. Sanjay saxsena, “MS Office 2000”, Vikas Publishing House, 2000.
3. Linda Tway, Sapphiro Pacific Lajolla, “Multimedia in Action”, Academic Press, 1995.
4. Microsoft Office – Complete Reference – BPB Publication.
5. Courter, G Marquis (1999). Microsoft Office 2000: Professional Edition. BPB.
6. PC Software – Shree Sai Prakashan, Meerut.

MACHINES AND MAINTENANCE

(Course Code: 15FADV0206)

Credits: 2 + 2

(CFA=40+ ESE= 60)

Objectives:

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

SOL (Specific Objective Learning):

- The students to understand machines and maintenance of leather products
- The students Impart basic maintenance of machines

UNIT – I

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

UNIT – II

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

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

UNIT – III:

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

UNIT – IV

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

UNIT – V

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

REFERENCES

1. Shigley, J.E. and Vicker, J.J., “Theory of Machines and mechanisms”, McGraw Hill, 1995.
2. Paul, B., “Kinematics and Dynamics of Planar Machinery”, Prentice Hall, 1979.

YOGA

(Course Code: 15YOGV0001)

Credits: 0 + 1

(CFA=40+ ESE= 60)

OBJECTIVE:

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

SOL (Specific Objective Learning):

- Yoga for keeping body and mind in good condition.

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

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

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

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

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

REFERENCES

- 1.Asanas, Swami Kuvalayananda, Kaivalaydhama, Lonavla, 1993.
- 2.Light on Yoga, B.K.S. Lyengar Harpine Collins Publication, New Delhi,2000
- 3.Sound Health Through Yoga, K.Chandrasekaran, Prem kalia Publications, Sedapatti 1999.
- 4.Yoga For All, Maharishi Patanjali, Sahni Publications, 2003.
- 5.Yoga For Health, Institute of Naturopathy and Yogic Sciences, Bangalore, 2003.
- 6.Yoga For Health, K.Chandra Shekar, Khel Sathitya Kendra, Theni,2003.
- 7.Yoga For the Modern Man, M.P.Pandit, Sterling Publishers Private Limited, New Delhi,1987.
- 8.Yoga For You, Indira Devi, Jaico Publishing house, Chennai,2002.

SKILL BASED COMPONENTS

BASICS OF CUTTING, CLOSING AND LASTING (T)

(Course Code: 15FADV0207)

Credits: 4 +0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students to learn about the cutting, closing and lasting of footwear
- To make the students understand the cutting, closing and lasting of footwear

SOL (Specific Objective Learning:)

- The students to learn about the cutting, closing and lasting of footwear
- The students understand the cutting, closing and lasting of footwear

UNIT-I.

Clicking – Definition, role of clicking room, qualities required for good clicking operators. Drawing of Hide / Skins with their parts. Identification of stretch tension.

Cutting techniques of leather and non leather materials.

Allowance – meaning, types of cutting allowances, importance of cutting allowance, Cutting Directions

Layout preparations material calculations – Rus & small method

Cutting machines- swing arm cutting machine, Beam press cutting machine, Travelling head press cutting machine. Computer aided cutting machines

Cut-ability of different materials, Norms and Wastage calculation

Cutting Tools – Dies, Different types – single edge, double edge, length, storage of dies, Notches of dies.

Cutting of different types of Leather - corrected Grain (Oxford type), Cutting buff calf (casual type), Cutting nubuck / suede (wing cap Oxford layout) etc.

Cutting Machineries – Swing arm, Travel head, Strap cutting, Various Capacity and functions, Automation in Cutting – Knife cutting, Laser cutting and Water Jet cutting

UNIT –II

Sewing – definition, Tools used in closing room. Types of sewing machines, (Flat bed, Post bed, Cylinder bed) preparations, marking, embossing, machines used in closing section. sewing machine needle – parts and functions of sewing machine needle, needle broken policy, Classification of needles,

Seam – Definition, Types of seams, Types of seam finishes, Edge Finishing, top seams, Decorative stitching. Edge treatment, Binding operations.

Needle , thread, stitch formations, conveyors, Adhesives.

Sequence of operations for various upper models. Derby, oxford, slip-on, Boot, moccasin, court shoe, etc. Fault and Remedies of closing room.

UNIT –III

Principles and methods of lasting for different types of constructions – Manual and mechanical method.

Pre-lasting – pre-forming, insole attaching staple attachment, back part moulding.

Moisture conditioning – Humidifying rooms Mulling cabinets, Toe puff reactivations. Effect of temperature, humidity and materials in lasting and making operations.

UNIT – IV

Sole attaching – Lasted margin, upper preparations, sole preparations, sole cementing, bottom fillers and shank adhesive drying, Heat activation, pressing, De-lasting.

Unit – V

Various methods of constructions – cemented, welted, stroble, direct moulded construction, stitch down construction, string lasting.

REFERENCES

1. Swamm Siddha manual by FDDI
2. Manual of shoe making – clarks ltd.
3. Comprehensive Footwear Technology by S.N.Ganguly
4. NIMI Publications
5. SATRA Publications

CUTTING TECHNIQUES FOR LEATHER PRODUCTS

(Course Code: 15FADV0208)

Credits: 1 + 3

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

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

Cutting techniques for Footwear

Cutting Tools – Dies, Different types – single edge, double edge, length, storage of dies, Notches of dies.

Cutting Machineries – Swing arm, Travel head, Strap cutting, Various Capacity and functions, Automation in Cutting – Knife cutting, Laser cutting and Water Jet cutting

1. Cutting of various upper leathers
2. Cutting of various lining leathers
3. Cutting system of non-leather materials
4. Cutting of non- leather materials
5. Cutting of bottom stock components
6. Cutting of different types of Leather - corrected Grain (Oxford type), Cutting buff calf (casual type), Cutting nubuck / suede (wing cap Oxford layout) etc.

Cutting techniques for Leather goods and Garments

1. Prepare patterns from templates
2. Sort and assess leather
3. Cut leather by hand
4. Cut lining and reinforcement materials by hand
5. Check cut components

REFERENCES

1. Comprehensive Footwear Technology by S.N.Ganguly.
2. Manual of Shoe Making – Clarks Ltd.
3. Swam Siddha Manual by FDDI.
4. Manuals from NIMI Publications

PRE-ASSEMBLING OPERATIONS FOR LEATHER PRODUCTS

(Course Code: 15FADV0209)

Credits: 1 + 3

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The students to learn the pre-assembling operations for leather products.
 - The students understand pre-assembling operations for leather products like foot wear, Leather Goods & Garments.
1. Splitting, skiving, Stamping, Embossing, fusing, edge inking / Edge treatment practice, Attaching & folding process for the
 - a) Making components of Derby upper
 - b) Making components of oxford upper
 - c) Making components of slip on / pantafola upper
 - d) Making components of Boot upper
 - e) Making components of moccasin upper
 - f) Making components of court shoe upper
 - g) Making components of sandal upper, etc
 2. Splitting, skiving, Stamping, Embossing, fusing, edge inking / Edge treatment practice, Attaching & folding process for the
 - a) Making components of Leather Goods – bags, belts, purse, coin pouches, ladies bags
 3. Splitting, skiving, Stamping, Embossing, fusing, edge inking / Edge treatment practice, Attaching & folding process for the
 - a) Making components of Leather Garments

REFERENCES

1. Swam siddha Manual by FDDI
2. NIMI Publications
3. Manual of shoe making – clarks ltd
4. Comprehensive Footwear Technology

STITCHING OF COMPONENTS FOR LEATHER PRODUCTS

(Course Code: 15FADV0210)

Credits: 1 + 3

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The students to learn the Stitching operations for leather products.
 - The students understand Stitching operations for leather products like foot wear, Leather Goods & Garments.
1. Stitching of components for the
 - a) Making of Derby upper
 - b) Making of oxford upper
 - c) Making of slip on / pantafola upper
 - d) Making of Boot upper
 - e) Making of moccasin upper
 - f) Making of court shoe upper
 - g) Making of sandal upper, etc
 2. Stitching of components for the
 - a) Making of Leather Goods, Carry out table work activities – bags, belts, purse, coin pouches, ladies bags
 3. Stitching of components for the
 - a) Making of Leather Garments – Jackets, Skirts, Apron, trousers

REFERENCES

1. Swyam siddha Manual by FDDI
2. NIMI Publications
3. Manual of shoe making – clarks ltd
4. Comprehensive Footwear Technology

INTERNSHIP –II

(Course code: 15FADV0211)

Credits: 0+2

CFA=50

SOL (Specific Objective Learning):

After successful completion of a field visit in a reputed Footwear manufacturing concern the student will have a complete commercial knowledge on Footwear and Accessories they will gain knowledge about the latest machineries and equipments.

Field Visit:

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

SEMESTER – III

GENERAL COMPONENTS

BUSINESS COMMUNICATION

(Course Code: 15FADV0307)

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.

SOL (Specific Objective Learning):

- The students to learn the basic Business Communication.
- Impart basic Business Communication to the students.

UNIT - I

Basic Principles of Communication: Introduction, Understanding Communication, the Communication Process, Barriers to Communication, the Importance of Communication in the Workplace

Types and Channels of Communication: Introduction, Types of Communication, Classification of Communication Channels.

The Nature of Business Communication: Introduction, Types of Business Communication, Communication Network in Organizations

UNIT - II

The Importance of Listening in the Workplace: Introduction, what is listening? Barriers to Listening, Strategies for Effective Listening, Listening in a Business Context.

Guidelines for Written Business Communication: Introduction, General Principles of Writing, Principles of Business Writing

Developing Oral Business Communication Skills: Introduction, Advantages of Oral Communication, Oral Business Presentations

UNIT - III

Reading Skills for Effective Business Communication: Introduction, what is reading? Types of reading, SQ3R Technique of Reading

Internal Business Communication: Guidelines for Meetings: Introduction, Types of Meetings, Before the Meeting, During the Meeting, After the Meeting, and Common Mistakes made at Meetings

Internal Business Communication: Writing Memos, Circulars and Notices: Introduction, What is a Memo? Circulars and Notices

UNIT - IV

Internal Business Communication – Electronic Media and Shareholder Communication: Introduction, what is an Intranet? , Communicating through Email, Communication with Shareholders

External Business Communication –Writing Business Letters: Introduction, Principles of Business Letter Writing, Types of Business Letters, Format for Business Letters

Other Forms of External Business Communication: Introduction, Communication with Media through News Releases, Communication about the Organization through Advertising

UNIT - V

Internal and External Business -Communication – Writing Business Reports: Introduction, What is a Report? Types of Business Reports, Format for Business Reports, Steps in Report Preparation

Employment Communication – Resumes and Cover Letters: Introduction, Writing a Resume, Writing Job Application Letters, Other Letters about Employment

Employment Communication – Group Discussions and Interviews: Introduction, What is a Group Discussion? Attending Job Interviews

REFERENCE

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

SKETCHING AND RENDERING – II

(Course Code: 15FADV0308)

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.

SOL (Specific Objective Learning):

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

UNIT 1

Lasts and Feet

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

UNIT 2

Ladies Shoe Design

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

UNIT 3

Presentation Skills Ladies Footwear

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

UNIT 4

Men's Shoe Design

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

UNIT 5

Presentation Skills Men's Footwear

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

REFERENCES

1. Stanyer, Peter, "The Complete Book of Drawing Techniques" – Arcturus Publishing Limited for Book Mart Limited 2003
2. Edith Tomory, "A History of Fine Arts' in India and the West" – Orient Longman Publishers 1982, reprinted 1999.
3. Hideaki Chijiwa, Colour harmony – "A Guide to creative colour Combination".
4. HelIn Goworek, "Drawing Course a step by step Guide" Blackwell Publications.
5. HW. Janson & Anthony Janson, "History of art" the western radition, revised 6th edition, Upper saddle rivet
6. Roy C. Craven, "Indian Art", Thames & 'Hudson.

PRINCIPLES OF MARKETING

(Course Code: 15FADV0309)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To facilitate understanding of the conceptual framework of marketing and its applications in decision making under various environmental constraints.

SOL (Specific Objective Learning):

- The Students for facilitate understanding of the conceptual framework of marketing and its applications in decision making under various environmental constraints

UNIT-I

Introduction: Concept, nature, scope and importance of marketing; Marketing concept and its evolution; Marketing mix; Strategic marketing planning – an overview. Market Analysis and Selection: Marketing environment – macro and micro components and their impact on marketing decisions; Market segmentation and positioning; Buyer behavior; consumer versus organizational buyers; Consumer decision making process

. UNIT-II

Product Decisions: Concept of a product; Classification of products; Major product decisions; Product line and product mix; Branding; Packaging and labeling; Product life cycle – strategic implications; New product development and consumer adoption process. Pricing Decisions: Factors affecting price determination; Pricing policies and strategies; Discounts and rebates.

UNIT-III

Distribution Channels and Physical Distribution Decisions: Nature, functions, and types of distribution channels; Distribution channel intermediaries; Channel management decisions; Retailing and wholesaling. Promotion Decisions: Communication Process; Promotion mix – advertising, personal selling, sales promotion, publicity and public relations; Determining advertising budget; Copy designing and testing; Media selection; Advertising effectiveness; Sales promotion – tools and techniques.

UNIT-IV

Marketing Research: Meaning and scope of marketing research; Marketing research process. Marketing Organisation and Control: Organising and controlling marketing operations.

UNIT-V

Issues and Developments in Marketing: Social, ethical and legal aspects of marketing; Marketing of services; International marketing; Green marketing; Cyber marketing; Relationship marketing and other developments of marketing.

REFERENCES

1. Kotlar, Philip, Marketing Management, Prentice Hall, New Delhi.
2. Stanton, Etzel, Walker, Fundamentals of Marketing, Tata-McGraw Hill, New Delhi.
3. Saxena, Rajan, Marketing Management, Tata-McGraw Hill, New Delhi.
4. McCarthy, E.J., Basic Marketing: A managerial approach, Irwin, New Yor

SKILL BASED COMPONENTS
FOOT ANATOMY AND SOLID MODELLING

(Course Code: 15FADV0312)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

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

SOL (Specific Objective Learning)

- The students for provide comprehensive knowledge anatomy of human foot and its functions.
- The understand basic comfort and protection of footwear.
- Impart in-depth knowledge of solid modeling and development of foot wear.

UNIT - I

ANATOMY OF HUMAN FOOT

Lower limb - bones, muscles, nerves and fascia, their functions in structural stability (static & dynamic) muscles in helping in walking, muscle relate to limb functions like flexion, extension, etc. Illustrations Diagram of Feets, Functions of Foot.

UNIT - II

GROWTH AND DEFORMITIES

Growth of foot from infancy to maturity, arches of foot, relationship between foot shape and last. Different types of foot deformities like PesCavus, Valgus, Blisters, Gangrene, injuries in sports, methods of prevention etc foot care and protection.

UNIT - III

BIO MECHANICS

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

UNIT - IV

Introduction to Foot Anthropometry- Design of anthropometric foot surveys, Data collection and Statistical Analysis of foot data, Establishment of Sizing systems.

Foot Sizing Systems such as English, French, American, German, Japan Mondo-point their conversion and comparison.

UNIT - V

SOLID MODELLING

Basic principles of solid modelling and surface modelling using contours and geometry. Use of solid modelling in designing and developing modern footwear.

Lasts: Different measurement of feet and lasts - methods, units

Materials for last making, manufacturing technique. Model development. Principles of grading - Manual, machine and computer grading.

REFERENCES

1. Hollinshead, H., "Text book of Anatomy", Oxford IBH London 1967.
2. Morton, D.J., "The Human Foot", Hafner Publishing Co., New York, London, 1964.
3. Thornton, J.H., "Text book of Footwear Manufacture", National Trade Press Ltd., London, 1970
4. Edwards, C.A., "Orthopaedic shoe technology", Precision Printing Co., Indiana, 1964.
5. Whittle, M., "Gait Analysis: An introduction," butterworth – Heinemann Publication, 2002.
6. Vincent G Duffy, "Digital Human Modelling", Springer, July 2011.

FOOTWEAR MANUFACTURING – I

(Course Code: 15FADV0313)

Credits: 1 + 3

(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

SOL (Specific Objective Learning):

- The students to learn the Footwear Manufacturing
 - The students understand the process involved in footwear making
1. Making of Derby shoe with cemented constructions
 2. Making of oxford shoe with cemented constructions
 3. Making of moccasin shoes with cemented construction
 4. Making of slip-on/ pantafola shoes with cemented constructions
 5. Making of court shoes with cemented constructions
 6. Quality control in shoe manufacturing

REFERENCES

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

LEATHER GOODS MANUFACTURING –I

(Course Code: 15FADV0314)

Credits: 1 + 3

(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

SOL (Specific Objective Learning):

- The students to learn the Leather Goods Manufacturing
- The students understand the process involved in leather goods making

Preparatory work

Obtaining, conforming and interpreting quality requirements and operational details relevant to the tasks- Folding allowances, Reinforcement attachment, Matching of notches and Cutting allowance

Obtaining and applying safety requirements from the organizational policies and procedures to the allotted task

Workbench and seating set-up to OHS practices

Selecting tools and equipment to carry out tasks consistent with the requirements of the operation- Marking pen, Awl , Bone folder ,Hammer , Scissors, Trimmer and Creaser

Machine set-up and adjustment according to specifications

Prepare leather goods components (coin pouch, wallet , clutch purse, card case)

Performing Construction operations according to specification- Folding construction, Stitch and turn construction and Piping construction

Joining components as required

Using adhesives safely to achieve specification

Performing other table work operations

Preparation of components are carried out according to OHS practices

Assemble and sew leather goods components

Sewing components of leather to form the whole leather goods in accordance with pattern specifications- Front leather component, Back leather component, Gusset leather component, Pocket leather component, Shoulder strap leather component ,

Attaching reinforcements to lining components

Sewing components of lining and reinforcements as required- Pocket lining component, Inside lining component, Reinforcement component, Sewing leather and lining components together, performing final sewing, Conducting necessary changes if required

REFERENCES

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

LEATHER GARMENTS MANUFACTURING –I

(Course Code: 15FADV0315)

Credits: 1 + 3

(CFA=60+ ESE= 40)

Objectives:

- To enable the students to learn the leather garments manufacturing
- To make the students understand the process involved in leather garments making

SOL (Specific Objective Learning):

- The students to learn the leather garments manufacturing
- The students understand the process involved in leather garments making

Preparatory work

Obtaining, conforming and interpreting quality requirements and operational details relevant to the tasks- Folding allowances, Fusing widths and Matching of notches

Selecting tools and equipment to carry out tasks consistent with the requirements of the operation-Ironing machine, Marking pen, Awl, Measuring tape, Scissors and Trimmer

Machine set-up and adjustment according to specifications

Prepare leather garment components (Skirt, apron, trouser)

Perform fusing operations on leather components- Paper fusing, Synthetic fusing and Textile fusing

Perform pasting/folding operations using double side scotch tapes

Perform appropriate pocket preparation

Assemble and sew leather garment components

Sewing components of leather to form the whole garment in accordance with pattern specifications-Yoke, Front/back, Waist band, Pockets, Facings, Attaching wadding to lining components

Sewing components of lining as required- Front, Back, Pockets

Sewing leather and lining components together

Checking garments for correct fit and assembly quality

Conducting first fitting on the dummy and necessary changes made, if required

Assessing second fitting of garment

REFERENCES

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

INTERNSHIP –III

(Course code: 15 FADV0316)

Credits: 0+2

(CFA=50)

SOL (Specific Objective Learning):

After successful completion of a field visit in a reputed Footwear manufacturing concern the student will have a complete commercial knowledge on Footwear and Accessories they will gain knowledge about the latest machineries and equipments.

Field Visit:

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

SEMESTER – IV
GENERAL COMPONENTS
INDUSTRIAL MANAGEMENT
(Course Code: 15FADV0410)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

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

SOL (Specific Objective Learning):

- The students to learn the industrial management
- The students understand the industrial management

UNIT – I

Basics of Management Introduction, Definition of management, characteristics of management, functions of management - Planning, Organising, Staffing, Directing, Co-ordination, Controlling, Motivating, Communication, Decision Making, Principles of management – F.W.Taylor, Henry Fayol, Elton Mayo, Administration and management, Nature of management, levels of management, managerial skills, managerial roles, Forms of Organization- Line , Line –staff etc. Forms of ownerships – Partnership, Proprietorship, Joint stock, Co-operative society, Govt. Sector etc,

UNIT – II

Strategic Management Military origins of strategy – Evolution - Concept and Characteristics of strategic management –Defining strategy – Mintzberg’s 5P’s of strategy – Corporate, Business and Functional Levels of strategy - Strategic Management Process. Preparing an Environmental Threat and Opportunity Profile (ETOP) – Industry Analysis - Porter’s Five Forces Model of competition.BCG Matrix – GE 9 Cell Model -Balanced Scorecard, Generic Competitive Strategies: Low cost, Differentiation, Focus.

UNIT – III

Quality Management Definition of quality, goalpost view of quality, continuous improvement definition of quality, types of quality – quality of design, conformance and performance, phases of quality management, Juran’s and Demings view of quality, Quality Management Assistance Tools: Ishikawa diagram – Pareto Analysis – Pokka Yoke (Mistake Proofing).quality circles, TQM, Kaizen, Five S (5S), Six sigma Quality Management Standards (Introductory aspects only)- The ISO 9001:2000 Quality Management System Standard- The ISO 14001:2004 Environmental Management System Standard- ISO 27001:2005 Information Security Management System

UNIT – IV

Financial & Project Management Capital Structure, Fixed & working capital, Role of Securities and Exchange Board of India (SEBI), function of money market and capital Market, sources of finance. Introduction to capital budgeting, Techniques of capital budgeting. Break even analysis - assumptions, importance, Cost-Benefit analysis, CVP graph, Project Management, Project network analysis, CPM, PERT and Project crashing and resource Leveling.

UNIT – V

Human Resource Development Strategic importance HRM; objectives of HRM; challenges to HR professionals; role, Responsibilities and competencies of HR professionals; HR department operations; Human Resource Planning - objectives and process; human resource information system.. Talent acquisition; recruitment and selection strategies, career planning and management, training and development, investment in training programme; executive development.

REFERENCE

1. Industrial Management by OP.Khanna.
2. Management by Knootz
3. Management by Griffin
4. Management theory and practice by JS.Chandan

INTERNATIONAL MARKETING

(Course Code: 15FADV0411)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

- To enable the students to learn the international marketing
- To make the students understand the international marketing

SOL (Specific Objective Learning):

- The students to learn the international marketing
- The students understand the international marketing

UNIT - I

Concept ; Domestic to Transnational Business ; Driving and Restraining Forces ; Characteristics and role of MNCs. Advantages and Disadvantages of Free trade ; The case for protection ; Forms of Restriction ; Effects of protection.

UNIT - II

Classical trade theory ; Theory of comparative costs in terms of money ; Evaluation of comparative costs theory ; General Equilibrium Approach ; Heckscher-Ohlin Factor – Price Equalisation theory ; Influence of factor mobility on volume of trade ; country similarity theory Gains and terms of trade ; Balance of trade and Balance of payments.

UNIT - III

International business environment – The economic environment ; social and cultural environment, political, legal and regulatory environment, natural environment. Technological environment .

UNIT - IV

International Institution Systems – IMF, World Bank and WTO(all in brief), / Regional economic integration; impact of integration; European Union; NAFTA;ASEAN; SAARC

UNIT - V

Strategy of International Business – Strategy, planning, organisational structure and process of control. Recent developments in international business.

REFERENCES

1. Cherunilam, Francis – International Business(PHI)
2. Misra, S. & Yadav, P.K. – International Business(PHI)
3. Aswathapa, K – International Business (Tata McGraw Hill)
4. Sharan, Vyuptakesh – International Business (Pearson Education)
5. Varshney R.L. and Bhattacharya ,B– International Marketing Management (Sultan Chand & Sons)

PRODUCTION OPERATIONS MANAGEMENT
(Course Code: 15FADV0412)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

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

SOL (Specific Objective Learning):

- The students to learn the Production Operations Management
- The students understand the steps involved in production operation Management.

UNIT - I

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

UNIT - II

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

UNIT - III

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

UNIT - IV

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.

UNIT - V

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)

REFERENCES

1. Adam Jr Everetl E. R J – Production and Operations Management (Prentice-Hall, 1992), 2000 5th ed.
2. Chary- Production and Operations Management (Tata McGraw-Hill, 1997 9th ed.)
3. Hill T- Operations Management (Palgrave, 2000)
4. Johnston R et al – Cases in Operations Management (Pitman, 1993)
5. McGregor D – Operations Management (McGraw-Hill, 1960) Morton- Production and Operations Management (Vikas)
6. Haleem A- Production and Operations Management (Galgotia books, 2004)
7. Shanker Ravi- Industrial Engineering (Galgotia)
8. Chase & Production and operation Management, Richard Irwin London; 1995, 7th ed.
9. Production & Operations Management.- Kanishka Bedi, (Oxford University Press)

SKILL BASED COMPONENTS

MATERIAL TESTING

(Course Code: 15FADV0417)

Credits: 3 + 1

(CFA=40+ ESE= 60)

Objective

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

SOL (Specific Objective Learning):

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

UNIT-I

Method of sampling & conditioning of upper materials & products.

UNIT-II

Physical & Chemical analysis of upper, lining, toe puff / stiffener, insole and sole.

UNIT – III

Testing of full shoe – visual and physic-mechanical tests like seam strength, strap strength, Toe load, Heel pull-off (ladies), top-line strength, water resistance, etc.

UNIT – IV

Testing of footwear grinders and accessories.

UNIT – V

Testing room managements – Humidity – temperature – Standards and guidelines – shoe testing centres.

REFERENCES

1. Footwear Testings – SATRA
2. CLRI publications

FOOTWEAR MANUFACTURING – II

(Course Code: 15FADV0418)

Credits: 1 + 3

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The students to make different types of footwear.
- The students to understand the different type's footwear constructions.

UNITS

1. Making of Derby shoe with stitch down constructions
2. Making of oxford shoe with good year welted constructions
3. Making of moccasin shoes- Lace types
4. Making of ankle boot with stroble constructions
5. Making of sandal with cemented constructions
6. Quality control in shoe manufacturing

REFERENCES

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

LEATHER GOODS MANUFACTURING - II

(Course Code: 15FADV0419)

Credits: 1 + 3

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The students to make a different types of leather goods
- The students to understand the different types leather goods

Preparatory work

Obtaining, conforming and interpreting quality requirements and operational details relevant to the tasks- Folding allowances, Reinforcement attachment, Matching of notches and Cutting allowance

Obtaining and applying safety requirements from the organizational policies and procedures to the allotted task

Workbench and seating set-up to OHS practices

Selecting tools and equipment to carry out tasks consistent with the requirements of the operation- Marking pen, Awl , Bone folder ,Hammer , Scissors, Trimmer and Creaser

Machine set-up and adjustment according to specifications

Prepare leather goods components (2-ladies handbag , travel bag)

Performing Construction operations according to specification- Folding construction, Stitch and turn construction and Piping construction

Joining components as required

Using adhesives safely to achieve specification

Performing other table work operations

Preparation of components are carried out according to OHS practices

Assemble and sew leather goods components

Sewing components of leather to form the whole leather goods in accordance with pattern specifications- Front leather component, Back leather component, Gusset leather component, Pocket leather component, Shoulder strap leather component ,

Attaching reinforcements to lining components

Sewing components of lining and reinforcements as required- Pocket lining component, Inside lining component, Reinforcement component, Sewing leather and lining components together, performing final sewing, Conducting necessary changes if required

REFERENCES

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

LEATHER GARMENTS MANUFACTURING – II

(Course Code: 15FADV0420)

Credits: 1 + 3

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

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

UNITS

Preparatory work

Obtaining, conforming and interpreting quality requirements and operational details relevant to the tasks- Folding allowances, Fusing widths and Matching of notches

Selecting tools and equipment to carry out tasks consistent with the requirements of the operation-Ironing machine, Marking pen, Awl, Measuring tape, Scissors and Trimmer

Machine set-up and adjustment according to specifications

Prepare leather garment components (Jackets 3 nos).

Perform fusing operations on leather components- Paper fusing, Synthetic fusing and Textile fusing

Perform pasting/folding operations using double side scotch tapes

Perform appropriate pocket preparation

Perform appropriate collar preparation

Perform appropriate sleeve preparation

Perform appropriate cuff preparation

Assemble and sew leather garment components

Sewing components of leather to form the whole garment in accordance with pattern specifications-Yoke, Cuff, Sleeve, Collar, Front/back, Waist band, Pockets, Facings, Attaching wadding to lining components

Sewing components of lining as required- Sleeve, Front, Back, Pockets

Sewing leather and lining components together

Checking garments for correct fit and assembly quality

Conducting first fitting on the dummy and necessary changes made, if required

Assessing second fitting of garment

REFERENCES

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

INTERNSHIP – IV

(Course code: 15FADV0421)

Credits: 0+2

(CFA=50)

SOL (Specific Objective Learning):

After successful completion of a field visit in a reputed Footwear manufacturing concern the student will have a complete commercial knowledge on Footwear and Accessories they will gain knowledge about the latest machineries and equipments.

Field Visit:

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

SEMESTER – V
GENERAL COMPONENTS
SHOE CAD

(Course Code: 15FADV0513)

Credits: 1 + 3

(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

SOL (Specific Objective Learning):

- The students to understand the CAD for shoe
- The students to understand the step involved in the CAD

UNITS

Digitization: 2D & 3D Coordinate extracting principles of digital and analog conversion, digital input / output processing systems..

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

1. Start leather shoe CAD operating system
2. Prepare and digitize patterns
3. Edit digitized patterns
4. Design and develop patterns using CAD
5. Grade patterns using CAD
6. Take measurements and verify patterns
7. Perform nesting
8. Plot and cut patterns using pattern plotter/cutter
9. Perform pattern conversion

REFERENCES

1. Manuals from Software suppliers
2. Handouts

CAD FOR LEATHER GOODS & GARMENTS

(Course Code: 15FADV0514)

Credits: 1 + 3

(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

SOL (Specific Objective Learning):

- The students to understand the CAD for leather goods & garments
- The students to understand the step involved in the CAD

UNITS

CAD for Leather goods

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

CAD for Leather garments

Start leather garment CAD operating system
Prepare and digitize patterns
Edit digitized patterns
Design and develop patterns using CAD
Grade patterns using CAD
Take measurements and verify patterns
Perform nesting and laying for marker making
Plot and cut patterns using pattern plotter/cutter
Perform pattern conversion

REFERENCES

1. Manuals from Software suppliers
2. Handouts

DESIGNING & PATTERN MAKING OF FOOTWEAR – I

(Course Code: 15FADV0522)

Credits: 1 + 3

(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.

SOL (Specific Objective Learning):

- The students understand about Designing and Pattern Making of Footwear.
- The students to gain knowledge on Footwear Designing.

1. Introduction to
 1. Basic designs
 2. Designing tools
 3. Pattern cutting techniques
 4. Last
 5. Safety precautions
2. Derivation of mean forme by different methods
 1. Masking
 2. Vacuum
 3. Slotted
3. Derivation of standards for
 1. Derby , 2. Oxford, 3. Slip on / pantafola
 4. Boot , 5. Moccasin, 6. Court shoe
 7. Sandals
4. Preparation /Derivation of Bottom profiles
 1. Outsole
 2. Insole
 3. Insocks
 4. Half insocks
 5. Stiffner
 6. Toe puff
 7. Sandal insole
5. Derivation/preparation of Derby upper, lining shell and sectional patterns.
6. Derivation of oxford upper, lining shell and sectional patterns.

REFERENCES

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

DESIGNING & PATTERN MAKING OF LEATHER GOODS - I

(Course Code: 15FADV0523)

Credits: 1 + 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.

SOL (Specific Objective Learning):

- The students understand about Designing and Pattern Making of leather goods
- The students to gain knowledge on leather goods designing.

UNITS:

1. Prepare workstation
2. Construct the Basic pattern
3. Develop working and cutting patterns
4. Test patterns and complete work
5. Create prototype
6. For leather goods – Bag, Purses, Belts, Coin pouches, key chain,

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

DESIGNING & PATTERN MAKING OF LEATHER GARMENTS – I

(Course Code: 15FADV0524)

Credits: 1 + 3

(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.

SOL (Specific Objective Learning):

- The students understand about Designing and Pattern Making of leather garments
- The students to gain knowledge on leather garments designing.

1. Measure and interpret garment dimensions
2. Construct basic block
3. Prepare patterns for leather garment components
4. Confirm pattern requirement
5. Test patterns and complete work
6. Prepare work station and work area
7. Check sample pattern requirements for grading
8. Grade patterns and maintain records
9. Prepare for prototype assembly
10. Assemble prototype components
11. Perform prototype finishing
12. For Leather garments – jacket, apron

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

PORTFOLIO PRESENTATION
(Course Code: 15FADV0525)

Credits: 0+2

(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.

SOL (Specific Objective Learning):

Portfolio is the collection of designs by a designer organized systematically. After gaining hands-on knowledge in the paper the student will be able to create portfolio on any theme that is provided to them. An effective and creative portfolio is required by each and every student to get into fashion designing career. Hence portfolio will act as a mirror of the student and will enable every recruiter to judge the student's designing skill based on the portfolio they have prepared.

Units

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

INTERNSHIP – V

(Course code: 15FADV0526)

Credits: 0+2

(CFA=50)

SOL (Specific Objective Learning):

After successful completion of a field visit in a reputed Footwear manufacturing concern the student will have a complete commercial knowledge on Footwear and Accessories they will gain knowledge about the latest machineries and equipments.

Field Visit:

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

SEMESTER – VI
GENERAL COMPONENTS
ENTREPRENEURSHIP DEVELOPMENT
(Course Code: 15FADV0615)

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.

SOL (Specific Objective Learning):

- The students to learn the Entrepreneurship Development.
- The students understand the Entrepreneurship opportunities

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.

REFERENCES

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. 3. Entrepreneurial Development in India Sami Uddin, Mittal Publication.
4. Entrepreneur Vs Entrepreneurship- Human Diagnosis of Development Banking Nagendra P. Singh, Asian society for Entrepreneurship Education and development

OCCUPATIONAL HEALTH AND SAFETY FOR FOOTWEAR AND ACCESSORIES

(Course Code: 15FADV0616)

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.

SOL (Specific Objective Learning):

- The students to learn the Safety in footwear & allied industries.
- The students understand the safety procedures involved in the footwear & 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 gages: Environmental pollution by footwear industry.

REFERENCES

1. William Handley, Industrial Safety Hard Book, 2nd edition, McGraw Hill Book Company, 1969.
2. H.W.Heinrich, P.E.Dan Peterson and Nester, Road industrial accident prevention, McGraw Hill Book Co. 1980
3. R.P. Blaka industrial safety, 3rd Edn. Prentice Hall inc., new Jersey, 1963.
4. EN – 344 Standards.

COSTING OF LEATHER PRODUCTS

(Course Code: 15FADV0617)

Credits: 4 + 0

(CFA=40+ ESE= 60)

Objectives:

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

SOL (Specific Objective Learning):

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

UNITS:

Footwear: Derby, Oxford, Moccasin, Boots, etc

Leather garment: Jacket, apron, trouser , skirt etc

Leather goods: Wallet, purse, ladies bag, travel bag etc.

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

REFERENCE

1. CLRI – publications
2. NIMI Publications

DESIGNING & PATTERN MAKING OF FOOTWEAR – II

(Course Code: 15FADV0627)

Credits: 1 + 3

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The students to designing & pattern making of footwear.
- The students understand the steps involved in footwear designing

UNITS:

1. Derivation of slip on / pantafola upper, lining shell and sectional patterns.
2. Derivation of Ankle boot upper, lining shell and sectional patterns.
3. Derivation of ladies court shoe upper, lining shell and sectional patterns.
4. Derivation of moccasin upper, lining shell and sectional patterns.
5. Derivation of sandal upper, lining shell and sectional patterns.
6. Derivation of children's chappals/ sandals upper, lining shell and sectional patterns

REFERENCES

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

DESIGNING & PATTERN MAKING OF LEATHER GOODS – II

(Course Code: 15FADV0628)

Credits: 1 + 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

SOL (Specific Objective Learning):

- The students to designing & pattern making of leather goods
- The students understand the steps involved in leather goods designing

UNITS:

1. Prepare workstation
2. Construct the Basic pattern
3. Develop working and cutting patterns
4. Test patterns and complete work
5. Create prototype
6. For leather goods – Ladies Bag, Travel Bag

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

DESIGNING & PATTERN MAKING OF LEATHER GARMENTS - II

(Course Code: 15FADV0629)

Credits: 1 + 3

(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

SOL (Specific Objective Learning):

- The students to designing & pattern making of leather garments
- The students understand the steps involved in leather garments designing

UNITS:

1. Measure and interpret garment dimensions
2. Construct basic block
3. Prepare patterns for leather garment components
4. Confirm pattern requirement
5. Test patterns and complete work
6. Prepare work station and work area
7. Check sample pattern requirements for grading
8. Grade patterns and maintain records
9. Prepare for prototype assembly
10. Assemble prototype components
11. Perform prototype finishing

For Leather garments – skirts, Trousers

REFERENCES

1. Manuals from CLRI
2. Manuals from NIMI Publications

PROJECT

(Course Code: 15FADV0630)

Credits: 0+6

(CFA=100)

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

ELECTIVE PAPERS
ILLUSTRATIONS OF LEATHER PRODUCTS (P)
(Course Code: 15FADV05E1)

Credits: 0 + 4

(CFA=60+ ESE= 40)

Objectives:

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

SOL (Specific Objective Learning):

- The students to make a different types of leather products
- The students to understand the different types leather products

Identify elements of fashion

Relevance and context of fashion- Arts and crafts movement, Art nouveau and Art deco

Terminology and theoretical concepts used in the fashion industry- Fashion, Style, Haute – couture, Pret A Porter, Knock offs and Trend cycle

Identify the fundamentals of fashion figures

Fundamentals of fashion figures- Proportions and Sketching of croqui (10-12 heads)

Sketching fashion figures and basic shapes of garments- Skirt, Jacket, Trousers and footwear

REFERENCE

1. Manuals from CLRI
2. Manuals from NIMI Publications

FINISHING TECHNIQUES OF LEATHER PRODUCTS (T)

(Course Code: 15FADV05E2)

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.

SOL (Specific Objective Learning):

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

UNITS

1. Finishes on leather
2. Dressing for leather finishes
3. Selecting the dressing systems for leather
4. Uni-forming, repairing and antiquing
5. Waxes- Cutting, Burnishing and polishing
6. Post finishing – treating non leather uppers
7. Problems with dressings
8. Repair and renovation on finishing, Causes of repairs works
9. Spraying
10. Auxilliary operation
11. Testing shoe room finishes
12. Prepare and perform finishing operation of leather goods & garments
13. Determine requirements for repair of leather goods & garments
14. Prepare leather goods & garments for repair work
15. Perform repair work

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.

SPECIALITY FOOTWEAR – SAFETY FOOTWEAR (T)

(Course Code: 15FADV05E3)

Credits: 4 + 0

(CFA=40+ ESE= 60)

UNIT – I

Principles and methods of lasting for different types of constructions – 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 constructions principles; preparation of uppers; insoles – Rib attaching – sewing in welt sole attaching – variation in the welted method – finishing and machinery.

UNIT – III

Principles and methodology of stitch down construction upper preparation, finishing and machinery.

UNIT – IV

Principles of Veldtschoen constructions, methodology, upper preparations, finishing and machinery.

UNIT – V

Introduction of safety footwear, principles and method of manufacturing of safety footwear, materials used for safety footwear – Finishing and Machinery.

REFERENCES

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

LIFE STYLE ACCESSORIES DESIGNING (T)

(Course Code: 15FADV05E4)

Credits: 4+0

(CFA=40+ ESE=60)

UNIT – I

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

UNIT – II

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

UNIT – III

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

UNIT – IV

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

UNIT – V

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

REFERENCES

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

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

(Course Code: 15FADV05E5)

Credits: 2+2

(CFA=60+ ESE=40)

UNIT – I :

Introduction, Principles Capabilities and Operation of graphical workstations. Central processing Unit, Graphic terminals, input/output devices, interface and storage devices, net working 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.

REFERENCES

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 Morgan Kaufmango, 1995.
3. Desai and Abel, “Introduction to FEM”, “Step by Step guide to CAD for footwear”. CAD Centre, SDDC, CLRI.
4. Mass Customization and Footwear: Myth, Salvation Or Really?: A Comprehensive Analysis Of The Adoption Of The Mass Customization Paradigm in Footwear by Claudio R. Bor, Sergio Dulio, Springer Verlag, 2007.

FOOTWEAR RETAILING (T)

(Course Code: 15FADV05E6)

Credits: 4+0

(CFA=40+ ESE=60)

UNIT - I : History of retailing, size of retail market, carriers in retailing.

UNIT - II : Retail formats, planning product range and feasibility of retail outlet.

UNIT - III : Depth & range of product mix, cost and viability of a new outlet.

UNIT - IV : Inventory management

UNIT - V : Retail pricing, costing and IT applications in retail

REFERENCES

1. Retail Management Berman B
2. Retail Management Levy Michael
3. Mail management: Singh & Shrinivasan
4. Retail and merchandizing Rabolt J. Nancy & Miller

SPORTS SHOE MANUFACTURING TECHNOLOGY (T)

(Course Code: 15FADV05E7)

Credits: 4+0

(CFA= 40+ ESE=60)

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

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

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

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

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

REFERENCES

1. Cavanagh, Peter.R “ The Running shoe book”
2. Cheskin Melvyn. P “ The complete hand book of athletic footwear” Fair child books 1986.
3. Nigg Benno.M Biomechanics of Running shoes. Human kinetics publishers, Inc 1986.
4. Rossi wiliam A, ed. The complete footwear Dictionary Krieger publishing, 1993.
5. The shoe in sport, Mosby – year book, 1989.