

I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY
M.Sc. (GMT) Batch 2018 onwards

Scheme & Syllabus of

**M. Sc. Garment Manufacturing Technology
(GMT)**

Batch 2018 onwards



By

Board of Studies Fashion Designing

Department of Academics

IK Gujral Punjab Technical University

I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY

M.Sc. (GMT) Batch 2018 onwards

Master of Science in Garment Manufacturing & Technology (M.Sc. GMT):

It is a Post Graduate (PG) Programme of 2 years duration (4 semesters)

Eligibility for Admission:

All those candidates who have passed B.Sc./Tech/B.E. or BA/B.Com/BBA/BCA with one of the following subjects :

Economics / Statistics / Management / Marketing / Mathematics / Textiles / Fashion/Accounts / Computer / Home Science / Any other related Diploma

Courses & Examination Scheme:

First Semester

Contact Hrs : 34 Hrs

Course Code	Course Title	Load Allocation			Marks Distribution		Total Marks	Credits
		L	T	P	Internal	External		
MSGMT101-18 (Core)	Ergonomics and Work Place Design In Garment Industry	3			40	60	100	3
MSGMT102-18 (Core)	Textile science	3			40	60	100	3
MSGMT103-18 (Core)	Introduction to knitting	2			20	30	50	2
MSGMT104-18 (Core)	Survey of apparel design	2			40	60	100	2
MSGMT105-18 (Core)	Apparel industry - an introduction	2			20	30	50	2
MSGMT106-18 (Core)	Garment production machinery and equipment.	3			40	60	100	3
MSGMT107-18 (Non-Core)	Principles and practices of management	3		-	20	30	50	3
MSGMT108-18 (Non-Core)	Principles of accounting	3			20	30	50	3
MSGMT109-18 (Non-Core)	Personality Development And Communication Skills	3			20	30	50	3
MSGMT110-18 (Non-Core)	Basics of computer	-		2	20	30	50	1
MSGMT111-18 (Core)	Garment construction	-		4	60	40	100	2
MSGMT112-18 (Core)	Basic pattern making	-		4	60	40	100	2
Total		24		10	400	500	900	29

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Second Semester

Contact Hrs : 33 Hrs

Course Code	course title	Load Allocation			Marks Distribution		Total Marks	Credits
		L	T	P	Internal	External		
MSGMT201-18 (Core)	Operations research	3			40	60	100	3
MSGMT202-18 (Core)	Work study for apparel manufacturing	3			40	60	100	3
MSGMT203-18 (Core)	Apparel standard, specification and quality control	3			40	60	100	3
MSGMT204-18 (Core)	Fabric dyeing & printing	3	-		40	60	100	3
MSGMT205-18 (Core)	Garment analysis	3	-	-	20	30	50	3
MSGMT206-18 (Core)	Spreading and cutting of apparel products	3			40	60	100	3
MSGMT207-18 (Non-Core)	Financial management	3	-	-	20	30	50	3
MSGMT208-18 (Non-Core)	Statistics of apparel manufacturing	2	-		40	60	100	2
MSGMT209-18 (Core)	Garment construction	-	-	4	60	40	100	2
MSGMT210-18 (Core)	Pattern making & grading	-	-	4	60	40	100	2
MSGMT211-18 (Non-Core)	Graphic design & applications	-	-	2	60	40	100	2
Total		23	-	10	460	540	1000	29

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Third Semester

Contact Hrs : 35 Hrs

Course Code	Course Title	Load Allocation			Marks Distribution		Total Marks	Credits
		L	T	P	Internal	External		
MSGMT301-18 (Core)	Apparel production control and computer integrated manufacturing system	3			40	60	100	3
MSGMT302-18 (Core)	Fabric & garment finishing	3			40	60	100	3
MSGMT303-18 (Core)	Apparel marketing & merchandising	3	-		40	60	100	3
MSGMT304-18 (Core)	Costing of apparel products	3	-	-	40	60	100	3
MSGMT305-18 (Core)	Research methodology	3			40	60	100	3
MSGMT306-18 (Non-Core)	Managerial economics	3			40	60	100	3
MSGMT307-18 (Non-Core)	Human resource management	3	-		20	30	50	3
MSGMT308-18 (Non-Core)	Introduction to cost accounting	3	-	-	20	30	50	3
MSGMT309-18 (Core)	Garment construction	-	-	3	60	40	100	2
MSGMT310-18 (Core)	Industrial pattern making & grading	-	-	2	60	40	100	2
MSGMT311-18 (Core)	Cad for pattern making & grading	-	-	2	60	40	100	2
MSGMT312-18	Internship			4	60	40	100	2
Total		24		11	520	580	1100	32

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Fourth Semester

Contact Hrs : 33 Hrs

Course Code	Course Title	Load Allocation			Marks Distribution		Total Marks	Credits
		L	T	P	Internal	External		
MSGMT401-18 (Core)	Apparel product engineering & plant layout	3			50		50	3
MSGMT402-18 (Core)	Trade documentation	3	-	-	50		50	3
MSGMT403-18 (Non-Core)	Entrepreneur development programme & Intellectual Property Right	3	-	-	50		50	3
MSGMT404-18 (Core)	Project management	3			50		50	3
MSGMT405-18 (Non-Core)	International finance	3			50		50	3
MSGMT406-18	Research project	-		10	150	250	400	5
Total		15		10	400	250	650	20

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MSGMT101-18

ERGONOMICS AND WORK PLACE DESIGN IN GARMENT INDUSTRY

Course Outline:

OBJECTIVE:-

To familiarize the student who come from different educational backgrounds with basic technology inputs and engineering fundamentals. This will help student in understanding other vital subject of Garment Manufacturing Technology discipline which demand the knowledge of basic engineering principles.

Course Topics:-

UNIT-1

1. Ergonomics development:

- 1.1 Definition of ergonomics
- 1.2 History of ergonomics
- 1.3 Standards

UNIT-2

2. Ergonomic conditions of work

- 2.1 Physiological conditions
- 2.2 Psycho-sociological conditions
- 2.3 Anthropometric conditions
- 2.4 Ecological conditions

UNIT-3

3. Ergonomic principles

- 3.1 Ergonomic principles in designing workplace
- 3.2 Ergonomic principles in designing working processes
- 3.3 Ergonomic principles in determining working time
- 3.4 Ergonomic principles in handling material and tools
- 3.5 Ergonomic principles in designing environment

UNIT-4

4. Ergonomic design of workplace in garment industry

- 4.1 Ergonomics in the storage of textile materials
- 4.2 Ergonomics workplaces in garment manufacture preparation
- 4.3 Ergonomics in cutting room
- 4.4 Ergonomics in sewing room
- 4.5 Ergonomics in finishing room

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4.6 Ergonomics workplaces in garment warehouse and distribution

4.7 Ergonomics workplaces in the clothing store

4.8 Ergonomics maintenance workplaces

References:-

- 1) Ergonomics in the garment industry BY Dr. Gordana Colovic
- 2) Human Factors In Engineering and Design Seventh Edition by Mark S. Sanders, Ph.D. California State University, Northridge Ernest J. McCormick, Ph.D. Late Professor Emeritus of Psychological Sciences. Purdue University

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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MSGMT102-18

TEXTILE SCIENCE

Course Objectives: This course will expose to students to the fundamentals of the textile industry, with a focus on fibers, yarns and woven fabrics.

UNIT – 1

1. Overview of the Textile industry.
2. SWOT analysis of the Indian Textile industry.
3. Basic Fiber properties
4. Classification of fibers
5. Natural fibers- Sources, properties & end use , cotton, flax, jute, wool and silk
6. Manmade fibers- Rayon, Acetate, Nylon, Polyester, Acrylic, Spandex, Polyolefin.
7. Latest fibers

UNIT – 2

1. Ring Spinning
2. Open end spinning- an overview
3. Yarn classification
4. Yarn numbering system
5. Sewing threads
6. Yarn defects

UNIT - 3

1. Basics of weaving
2. Basic weaves
3. Calculation of gsm & loom production
4. Fabric defects
5. Introduction to Non Woven fabrics
6. Introduction to bonded and laminated fabrics
7. Common fabric names
8. Textile Testing
9. Care Labeling

Instructions to the teacher: Field trip to a spinning and weaving unit will be taken.

Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 20 marks.

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2. There will be six questions of 10 marks each, out of which four questions are compulsory. The questions will be two from each unit.
3. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

Reference books:

1. Fiber to Fabric by: Corbman
2. Textiles by: Sara J. Kadolph
3. Textile Science by: Gohl & Vilensky
4. Fabric Science by : Joseph Pizzuto

Note:

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- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
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MSGMT103-18

INTRODUCTION TO KNITTING

Course Objectives: To understand the basics of the knitting industry with special focus on weft knitting.

Unit I

1. Introduction to Knitting and the knitting industry
2. Difference between knitted and woven fabrics
3. Basic terms related to knitting
4. Types of knitting – warp and weft knitting
5. Overview of a knitting machine
6. Knitting needles- parts and knitting cycle

Unit II

1. Knitting cams
2. Knitting sinkers
3. Knitted loops
4. Basic weft knitted stitches
5. Basic weft knitted structures

Unit III

1. Weft Knitting machines
2. Classification of weft knitted garments
3. Basic Terms related to warp knitting
4. Warp knitting machines
5. Production Calculations
6. Calculation of gsm and tightness factor
7. Common fabric names
8. Knitted fabric defects

Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 10 marks.
2. There will be six questions of 5 marks each, out of which four questions are compulsory. The questions will be two from each unit.
3. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

Books:

1. Knitting Technology by: David J. Spencer
2. Knitting Technology by: Ajgaonkar

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MSGMT104-18

SURVEY OF APPAREL DESIGN

Objective:

1. Understand the process of designing.
2. Knowledge of silhouettes, shapes and sizing of garments
3. Designing terminology.
4. Understand the relevance of forecasts and trend services.
5. Relationship of color and design with garment

UNIT - I

Fashion

- Terminology
- Cycle
- Influence

Design

- Elements
- Principles

Fashion

- American

Designers

- European
- Others
- Profiles of Fashion Designers

UNIT - II

Designing

- Process

Fashion Design

- Collars

Details

- Pockets
- Trims
- Embroidery etc.
- Silhouettes/Shapes/Sizes

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- Silhouettes through the Decades.

UNIT - III

- Forecasting Trends and how to use the
- Couture and ready to Wear
- Analysis of Designer Labels at the Resource Centre

UNIT – IV

- Draping and Pattern making

EXAM FORMAT – SUBMISSION AND THEORY

Note:

- Instructions for External Examiner: The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
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MSGMT105-18

APPAREL INDUSTRY – AN INTRODUCTION

Course Objectives:

To provide a broad overview of structure and practices of the Apparel Industry in India and Abroad. To familiarize the students with Fashion industry terminology and enable identification of the various levels of the industry.

Course Outline:

UNIT I

The need for clothing and apparel, clothing culture and communication. Components of Apparel Industry.

APPAREL INDUSTRY - A HISTORICAL PERSPECTIVE

Growth of the Industry over the years dating back to the civilizations. Development of the Industry through the following stages:

- a. Industrial Revolution
- b. World War I
- c. Period between the wars
- d. Post war fashion development
- e. Into the 90's

UNIT II

CONSUMER DEMAND & ACCEPTANCE OF FASHION

Economic, Technological, Marketing and social influence on fashion and the apparel industry with special reference to India.

Fashion change and consumer acceptance.

THE CONCEPTUALISATION OF APPAREL

Design development, major fashion centres of the world and brief introduction to designers.

Introduction to sourcing

UNIT IV

THE RETAILING INDUSTRY

Various types of retailers. Franchise Retailing private labels & others.

Department stores, specialty stores, chain retailers, Mail order houses, shopping malls.

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Major domestic retailers/overseas retailers.

Auxiliary Fashion Enterprises.

Fashion Information Service.

Advertising and Publicity agencies.

Other fashion agencies.

Project work-

THE APPAREL INDUSTRY IN INDIA

Domestic Industry: size of the Industry, nature of the Industry and its development in the last years.

Export Industry: size and nature of the Industry.

Apex organizations like AEPC, GEA, AHEA, CMAI etc. Their role in the promotion of garment exports.

RECOMMENDED READINGS

Inside the fashion business: Tarnow, Guerreiro & Judelle.

Fashion from concept to consumer: Stephens Frings. Understanding Fashion: Elizabeth Rouse. The World of Fashion: Leonard G Rubin.

Note:

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- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
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MSGMT106-18

GARMENT PRODUCTION MACHINERY & EQUIPMENT

UNIT-1

- Introduction to spreading machines and cutting machines - types and functions
- History of sewing machines and development.
- Sewing machinery – types of sewing machines

UNIT-2

- Sewing Bed types
Horizontal Bed Types
Vertical Bed Types
- Needle
Functions of needle parts
Types of needles
Points of needles
Sizes of needles
Defects in needles
Needle Heat and Friction
- Stitching Mechanisms
Loppers
Blind
Eye
Hook
Bobbins

UNIT-3

- Feed Mechanisms
Variations in Feed Mechanisms
Machine Speed and Rate of Feed
Stitch Size Regulation
- Lubrication Systems
Types of lubrication
- Operator Training
Types of Training
Plotting Operator Training Performance

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UNIT-4

- Stitch Type Analysis & Classification
Class 100 through 600
Applicable Mechanisms
Throat Plate
Chaining Plate
Chaining Tongue
Thread Fingers & Thread Hook
Loop Spreaders
- Threading Principles
Tension Devices
Take- up Devices
Thread Guides
Thread Packaging
- Work-aids and attachments
Functions of pullers
Guides and folders
Compensating presser foots- left, right, double; feller, hemmer etc.

References:

1. Jacob Solinger., "Apparel Manufacturing Handbook ", VanNostrand Reinhold Company (1980)
2. Peyton B .Hudson. "Guide to Apparel Manufacturing ", MEDIAppearlInc (1989) ISBN: 0 - 945116-08-X.
3. Carr.H, Latham. B., "The Technology of Clothing Manufacture ", Blackwell Scientific Publications (1988).

Note:

- Instructions for External Examiner: The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
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MSGMT107-18

PRINCIPLES AND PRACTICES OF MANAGEMENT

Objectives:

To acquaint the students with business organization and to familiarize them with basic management processes and concepts.

Unit 1

Management: Definition, nature, purpose and scope and role of management. Functions of a manager, Ethics and social responsibility of management, Organizational Environment.

Unit 2

Evolution of management thought: Contribution made by Taylor, Gantt, Gilbreth, Fayol, Weber, Elton Mayo, Chester Bernard, Likert, McGregor, Peter F. Drucker, M.E. Porter.

Schools of Management: Scientific Management, Human Behavior, Mathematical School, Systems Approach of Management.

Unit 3

Planning: Types of plans, process of planning, Management by Objectives, Nature and purpose of strategies and policies. Decision-Making: Importance and steps in Decision Making, Decision making under certainty-programmed decisions, decision-making under uncertainty - non-programmed decisions, group aided decisions. Concept of Enterprise Resource Planning.

Organizing: Concept of organization, process of organizing, Basis of departmentation, Authority & Power, Line & Staff relationships. Delegation-authority, responsibility, accountability, Steps to make delegation effective, decentralization-purpose and types of decentralization, Span of Management.

Unit 4

Coordination: Need, factors which make coordination difficult, techniques to ensure effective coordination.

Control: Concept and Techniques, Human response to control, Types of Control- Feed forward control, Concurrent Control, Feedback Control. Developing a quality control system.

Morale- Introduction, factors affecting morale.

Communication Process and Barriers to effective communication.

Business Case Studies

Suggested Readings:

1. Harold Koontz & Heinz Weihrich: Essentials of Management, Tata McGraw Hill
2. Stoner, Freeman, Gilbert Jr.: Management Prentice Hall India.
3. Heinz Weihrich & Harold Koontz: Management (A Global Perspective), Tata McGraw Hill.
4. Robbins & Coulter: Management Prentice Hall India.
5. Robbins SP and Decenzo David A – Fundamentals of Management: Essential concepts and Applications. (Pearson Education, 6th Edition).

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Note:

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- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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MSGMT/FMM/AC108-18

PRINCIPLES OF ACCOUNTING-I

Course Objectives:

- To provide a fundamental knowledge of accounting
- At the end of this course the student will have a working knowledge of the double entry system of book keeping.

UNIT - I

1. Introduction to Accounting

Nature and scope of accounting

Users of accounting information

Forms of business organization

Double entry bookkeeping.

UNIT - II

2. The Double Entry System

The Journal

The Ledger

The Cash Book

3. Manufacturing Trading and Profit & Loss Account & Balance Sheet.

The Profit & Loss A/C

The Balance Sheet – With Adjustment at the close of financial year. Adjustment in Final Accounts will be relating to closing stock, o/s expenses, prepaid expenses, and provision for doubtful debts, depreciation (Straight line method or WDV method).

Text books:

- Elements of Book Keeping By Arora JS & Mohan Juneja C.
- Financial Accounting by S.A. SIDDIQUI.
- Double Entry Book Keeping By G.S Grewal, H.S. Grewal

Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 10 marks.
2. There will be six questions of 5 marks each, out of which four questions are compulsory. The questions will be two from each unit. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

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MSGMT109-18

PERSONALITY DEVELOPMENT AND COMMUNICATION SKILLS

UNIT-1

- Introduction to Personality Development
 - a. What is personality?
 - b. Why does it matter?
 - c. We are all unique.
- The Developing Personality
 - a. How do personalities develop?

UNIT-2

- Stages of Development
 - a. Freudian stages of development
- ‘Need’ a little personality?
 - a. How needs impact personality
 - b. Maslow’s hierarchy of needs

UNIT-3

- Basic Personality Traits
 - a. Values
 - b. Beliefs
 - c. Interactions
 - d. Experiences
 - e. Environmental influences
 - f. The big five dimensions
- Personality type

UNIT-4

- Personality and Career Choice
 - a. Matching your career and personality
 - b. Why it matters
 - c. Self-efficacy
- Changing Your Personality
 - a. Can personalities change?
 - b. Being yourself, being adaptable
 - c. Positive attitude

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d. Individuality

e. Controlling emotions

Developing communication skills- interview, body language

Note:

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MSGMT110-18

BASICS OF COMPUTER

Course DESCRIPTION:

Develops introductory skills in the Microsoft Office Suite (Word, Excel and PowerPoint), Windows Explorer, Internet, and computer concepts through demonstrations and lab exercises.

Course objectives and content

Upon completion of this course students will be able to:

Students will set familiar with the fundamentals and some advance features of MS-WORD, MS-EXCEL, MS-POWERPOINT AND WEB NETWORKING.

1. To offer a comprehensive presentation of Ms-Office-2007
2. To explore students to the practical example of the computer as a useful tool.
3. To develop an exercise oriented approach that allow knowing by doing.
4. Demonstrate the skills in the appropriate use of various features of the spread sheet package MS Excel and also to create useful spreadsheet applications like tabulated statements, balance sheets, statistical charts, business statements, etc.

Duration-6 months

One class per week of 3 hrs.

Unit-I Introduction to MS Word, Menus, Working with Documents, Formatting page and Setting Margins, Converting files to different formats, Editing text documents, Formatting documents, Creating Tables, Table settings, Tools, Word Completion, Spell Checks, Drawing and printing documents, Importing and Exporting, Sending files to others, Editing text documents, Inserting and Deleting, Find, Search, Replace Commands.

Unit-II Introduction to Excel, Spreadsheet & its Applications, Menus, Toolbars, Working with Spreadsheets, Converting files to different formats, Computing data, Formatting spreadsheets, Working with sheets, Sorting, Filtering, Validation, Consolidation, Subtotal .Creating Charts, Selecting charts, Formatting charts, label, scaling etc., Using Tools, Error Checking, Spell Checks, Formula Auditing, Introduction to power point, Opening new Presentation, Selecting presentation layouts. Creating a presentation, Formatting a presentation, Adding style, Color, gradient fills, Arranging objects, Slide Background, Slide layout, Adding Graphics to the presentation, Inserting pictures, movies, tables, etc into the presentation, Drawing Pictures using Draw, Adding effects to the presentation, Setting Animation & transition effect, Adding audio and video.

Unit-III (Web Technology-I) Introduction to HTML, HTML Tags (Paired and Singular), Commonly used HTML commands, Headings, Paragraphs, Text formatting, Creating Web Images, About images for the web, Getting images, Saving Images for the web, Image size, Making Text bold or italic, Changing the size of text, creating superscripts and subscripts, Using Images, Inserting images to a web page, Alt text or Alternate text, Image size, Aligning images, Adding space around images, Text wrapping around images

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Unit-IV (Web Technology-II) Links: Absolute Links, Relative Links, Creating a link to another page, Targeting Links, Using images as links, Lists, Ordered Lists, Unordered lists, Choosing bullets, Definition Lists , Tables, Creating a simple table, Table attributes; border, alignment, cell content alignment, Background, text wrapping row span, Col span, table in a table ,Introduction to Frames, Creating vertical frames, Creating horizontal frames, Named Frames, Creating borderless frames, Inline or floating frames, Introduction to forms, Creating a Form, Check boxes and Radio Button, Introduction to Cascading Style Sheets , Concept of CSS, Creating Style Sheet, CSS Properties, CSS Styling (Background, Text Format, Controlling Fonts), Working with block elements and objects , Working with Lists and Tables, CSS Id and Class , Box Model (Introduction, Border properties, Padding Properties, Margin properties) , CSS Advanced (Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Navigation Bar, Image Sprites, Attribute sector), CSS Color , Creating page Layout and Site Designs.

Examination /Evaluation scheme

- **Practical Examination:** One Practical examination of 3 hours duration will be conducted on the modules described in the curriculum. The maximum marks will be 50.

Note: All topics are covered in extreme detail with practical examples for all.

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MSGMT111-18

GARMENT CONSTRUCTION

Course description:

- This course introduces students to the many processes involved in the construction of I sample. Basic standard of professional sewing are stressed enabling the students to make finished garments from design projects in pattern making course.
- Through lectures and demonstration the students gains an insight in the direct relationship between pattern making and the ultimate quality of the finished sample.
- Students learn application of construction technology by undertaking a variety of exercises and projects using industrial equipment's. Each project emphasizes a specific procedure or necessary procedures.

SEMESTER – I

Course Objectives:

1. This course should enable students to translate paper pattern into a completed garment. This includes. Analysis of component pattern pieces and trimming: Planning a logical garment construction sequence.
2. Planning a layout of pattern pieces to achieve the most economical use of fabric yardage while maintaining grain lines.
3. Making necessary fitting adjustments of sample garments on dress form.
4. Effective use of steam pressing equipment during the process of constructing the garments.
5. Using appropriate seam finished and hemming procedures for particular fabrics.
6. Use of variety of design detail suitable for garments.

UNIT-1

Introduction to Sewing Machine

Safety regulation.

- I) Power Machine
- II) Pressing equipment
- III) Hand tools

UNIT-2

Operating the power machine

Power and speed control.

Stitching technique.

INTRODUCTION

- I) Use of single needle lockstitch machine
- II) Introduction of needle and their sizes.
- III) Thread ticket number and their construction.

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IV) Relation between thread, needle and their needle plate.

UNIT-3

BASIC SEWING LINE PRACTICE

Stitch practice on paper sheet.

Stitch practice on fabric

Sewing problems and their remedies

Threading minor mechanical adjustments.

- i) Straight line with guide line.
- ii) Straight line without guide line.
- iii) Squared line, French curve spiral.

TYPE OF SEAMS:

- i) Plain seams / pinked seam
- ii) Stitch and pinked
- iii) Turn and stitch
- iv) Flat and fell seam
- v) French seam, bias bound
- vi) Hongkongs
- vii) Overcoat / Sergeing.

UNIT-4

TYPES OF PLACKETS: (FRONT)

- i) Regular.
- ii) Top stitched with edge stitch.
- iii) Top stitched with one leg of pressure foot distance.
- iv) Concealed placket.
- v) Kurta placket.

TYPES OF SLEEVE PLACKET

- i) Faced placket
- ii) Continuous
- iii) Continuous diamond placket
- iv) Diamond placket

2. Shaping devices

- i) Darts
- ii) Tucks
- iii) Gathers
- iv) Pleats

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v) shiring

References:

1. Mary Mathews, 'Practical clothing construction' Thomson &co., madras, 1974.
2. Cock V, 'Dress Making Simplified' Black science, 1987
3. Patricytaylor J., Marti shoben M, 'grading for the fashion Industry' Stanley Thomas (publishers) Ltd.1990
4. Cartis Irving E., 'Fundamentals principles of pattern making for misses and women's garments' New York, FIT, 1987
5. Handrod Jack., 'Professional pattern grading for women's, men's and children's apparel', redendo bench plycon press,1980
6. Erwin M.D. and Kinchen,' Clothing for moderns' McMillan company New york 1970
7. Dangaji and deshpanda.'Basic process and clothing construction orient' longnians, 1970
8. Lang R.M., and Webster J., 'stitches and seams', The textile institute 1998

Examination /Evaluation scheme

- **Practical Examination:** One Practical examination of 3 hours duration will be conducted on the modules described in the curriculum. The maximum marks will be 100.

Note: All topics are covered in extreme detail with practical examples for all

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MSGMT112-18

BASICPATTERNMAKING

UNIT-1

1. Introduction to pattern Making.
2. Importance of Pattern making in the industry.
3. Measurement taking

UNIT-2

4. Understanding Size charts.
5. Developing Basic Blocks- (Semi Fit) Front and Back. Importance of basic blocks in the industry and its utilization.
6. Correcting basic blocks.

UNIT-3

7. Developing a prototype with the help of muslin and checking on dress form for proper fitting and fall.
8. Developing a basic block with darts. (Semi fit). (Converting dart less blocks into blocks with darts).
9. Developing a prototype with the help of muslin and checking on dress form for proper fitting and fall.

UNIT-4

10. Dart manipulation:
 - Single dart series
 - Double dart series
 - Multiple dart series.
 - Darts in the form of gathers
 - Darts away from bust point.
 - Designer dart series.
11. Developing a prototype of all the above series (atleast one sample each).
12. Checking on the dress form for any faults and correcting them.

REFERENCES:

- 1) "Pattern making for fashion design", Helen Joseph Armstrong, Harper Collins, LA.
- 2) "Metric Pattern Cutting for Menswear"; Winfred Aldrich, BSP Professional book Oxford.
- 3) "Pattern making and making up-the professional approach"; Marten Shoben and Janet P.Ward, Butterworth Heinman, Oxford.
- 4) "Modern sizing for women and childrens"; P.Kunick , Philip Kunik Publication London.

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- 5) “Dress Fitting”; Natalie Bray, Black well science Ltd London.
- 6) “Dress Patten Designing” Natalie Bray, Black well science Ltd London.

Examination /Evaluation scheme

Practical Examination: One Practical examination of 3 hours duration will be conducted on the modules described in the curriculum. The maximum marks will be 100.

Note:

All topics are covered in extreme detail with practical examples for all

SYLLABUS
SECOND SEMESTER

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MSGMT201-18

OPERATIONS RESEARCH

UNIT-1

- Basics: Development of Operation Research, characteristics of operations research. Decision making scope of O.R. in Garment industry. Phases of Operation research
- Linear Programming: Introduction, requirements and assumptions, formulation of problems. Example on applications of linear programming.

UNIT-2

- Graphical Method: To solve the formulated problems graphically, Limitation of graphical method
- Simplex Method: Solution of maximization and minimization problems by simplex method. Artificial variables and Big M method.

UNIT-3

- Transportation: Introduction, Method for obtaining initial basic feasible solution. Degeneracy. Vogel's approximation method and optimization.
- Assignment: Introduction, Comparison with transportation method. Assignment algorithm, restrictions on assignment.

UNIT-4

- PERT-CPM: Introduction to PERT-CPM. Role of PERT-CPM in project management
- Sequencing Problems

References:

1. J. Heizer, B.Render. "Production and Operations Management ", Prentice Hall (1993)
2. ISBN: 0-205-14048-3.
3. Hamdy A. Taha, "Operations Research an introduction ", Maxmillan Publishing Company,
4. New york, Third Edition, 1982.
5. Hamdy A. Taha, "An introduction to Operations Research ", Maxmillan Publishing Company,
6. New york, Fifth Edition, 1996.
7. Narayan Bhat U, "Elements of Applied Stochastic processes ", John Wiley and Sons, 1972.
8. Fredrick S. Hiller and Gerald J Liberman, "Introduction to Operations Research ", McGraw-Hill,

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

MSGMT202-18

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WORK STUDY FOR APPAREL MANUFACTURING

UNIT-1

Productivity:

Meaning, measurement and importance; productivity and standard of living; factors affecting productivity; improving productivity; determination of total time of a job; reducing ineffective time.

UNIT-2

Work Study:

Meaning, importance and procedure; human factor in the application of work study. Working conditions and environment; pre-requisites for work study.

UNIT-3

Method Study:

Selection of jobs, record, examination and development, movements of workers in the working area; evaluate, define, install and maintain; method study in the office.

UNIT-4

Work Measurement:

Purpose, uses, procedure and techniques; work sampling; time study; equipment, selecting and timing the job; rating and standard time; pre-determined time standards and standard data; uses of standard data.

REFERENCES

1. Khanna .O.P., "Industrial Engineering and Management", Dhanpat Rai & Sons, 1987.
2. Ralph M. Barnes, "Motion and Time study Design and Measurement of Work", 7th Edition, John Wiley& Sons, New York, 1980.
3. Introduction to Work Study - ILO, 1987.

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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MSGMT203-18

APPAREL STANDARDS, SPECIFICATIONS AND QUALITY CONTROL

Course Objectives:

1. Development of quality specifications for manufacturing.
2. Identification of Critical Inspections Points for Quality Assurance.
3. Analysis of relationship between quality specification requirements, time of performance, quality assurance, supervisory responsibility and cost.
4. Develop measurements of conformance to specification so as to assure product quality.

Unit I

1. Quality- definition-product based, user based, manufacturer based, value based
2. Quality guru's-demming, Juran, Crosby
3. Historical development of quality-4 stages-inspection, QC, QA, TQM

Unit-II

4. Achievement of quality- quality of design ,quality of conformance
5. Customer's acceptance of product and price
6. Quality standards and specifications- material specification, dimensional specification, performance specification, environmental specification

Unit-III

7. Quality control- meaning ,three basic aspects
8. 7 tools of quality control
9. Benefits of inspection and control
10. Organization for inspection and quality control- structure

Unit-IV

11. Stages of inspection- raw material, inline and final
12. Raw material – 4 point system,10 point system, Graniteville 75 system,
13. Inspection of accessories and trims-zipper, buttons, threads
14. Inline inspection- defects at various stages
15. Final inspection- types of inspection- 100 percent, no inspection, arbitrary sampling and AQL

References-

1. Managing Quality control in Apparel industry-P.V Mehta
2. Quality control handbook by Juran's

Instructions to the teacher: visit to export house to understand quality concepts and assignment based on any parameter of quality.

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Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 20 marks.
2. There will be six questions of 10 marks each, out of which four questions are compulsory. The questions will be two from each unit.
3. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

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MSGMT204-18

FABRIC DYEING & PRINTING

Course Outline: This course aims at providing an insight into the dyeing and printing of textiles.

UNIT - I

1. Grey Fabric Inspection
2. Characteristic of impurities.
3. Classification of impurities.
4. Preparatory Process for cotton - Stitching, Singeing, Desizing , Scouring, Bleaching and Mercerization
5. Preparatory Process for wool and silk
6. Preparation of blends
7. Definition of color, dyes, pigment.
8. Classification of dyes.

UNIT – II

1. Method of Application of dyes on textiles.
2. Properties of dyed textiles
3. Stages of dyeing
4. Dyeing machinery
5. Dyeing of blends
6. Dyeing defects

UNIT – III

1. Methods of printing
2. Styles of Printing
3. Special prints
4. Printing defects
5. Basics of processing of knits
6. Basics of denim washes
7. Fastness properties of fabrics
8. Cost reduction techniques in dyeing and printing

Instructions to the teacher: Field trip to a dyeing and printing unit will be taken.

Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 20 marks.

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2. There will be six questions of 10 marks each, out of which four questions are compulsory. The questions will be two from each unit.
3. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

REFERENES:

1. Fabric Science by Joseph J. Puzzuto.
2. Technology of Dyeing, Printing and Bleaching by Dr. V.A. Shenai.

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MSGMT205-18

GARMENT ANALYSIS

UNIT-1

1. Intrinsic & Extrinsic Parameters of Garment
2. Apparel professional.
3. Role of garment analysis
4. Methods of garment analysis
5. Process of garment analysis

UNIT-2

6. Analysis of seams.
7. Study of work aids.
8. Thread requirement calculations.

UNIT-3

Operation Breakdown of Garment to be studied

1. Men's formal shirt
2. Casual shirt
3. Jeans
4. Trousers
5. Kids wear
6. Ladies top dress
7. T- shirt
8. Jacket (uppers)

References

- 1) Binren juki publication
- 2) Introduction to apparel manufacturing

Note:

Instructions for External Examiner:

The question paper shall be divided in Three units. Shall comprise 6 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit. All questions will carry equal marks.

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MSGMT206-18

SPREADING AND CUTTING OF APPAREL PRODUCTS

Objective:

1. To be able to construct different markers.
2. To be able to evaluate various spreading modes and cutting modes.
3. To be able to evaluate auxiliary cutting room equipment.
4. To be able to understand flow process of manufacturing operation from design to finished products.
5. Organization chart for cutting room.
6. Cutting Room Reports.

Unit-1

1. Initiation of preproduction operations
2. Marker making-
 - A. Planning, drawing and reproduction of marker
 - B. Efficiency of marker plan
 - C. Methods of marker planning and marker use-manual and computerized
 - D. Requirements of marker planning

Unit 2

3. Spreading-
 - A. Spreading of fabric to form a lay
 - B. Requirements of spreading process
 - C. Methods of spreading—manual and automated
 - D. Nature of fabric packages
 - E. 4types of spread

Unit 3

4. Cutting-
 - A. Cutting of fabrics
 - B. Objectives of cutting
 - C. Methods of cutting
 - D. Cutting equipment's -portable and stationery ,specialized cutting machines
 - E. Automated controlled cutting systems

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References-

1. Technology of clothing manufacture-Carr and Latham
2. Apparel manufacturing handbook: analysis, principles and practice, Jacob Solinger

Instructions to the teacher: trip to a garment manufacturing unit will be taken.

Assignment based on samples of types of spreads and marker making

Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 20 marks.
2. There will be six questions of 10 marks each, out of which four questions are compulsory. The questions will be two from each unit.
3. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

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MSGMT/FMM/FM207-18

FINANCIAL MANAGEMENT

Course Objective:

- To provide a fundamental knowledge of accounting
- At the end of this course, the student will have a working knowledge of financial Management Analysis.

UNIT - I

Analysis of financial Statements-

- Financial Analysis: Meaning Significance & Purpose Limitations.
- Tools for financial Analysis Comparative statements, Common size Statements.

UNIT - II

- Accounting Ratios: Meaning and Objectives
- Liquidity Ratios: Current Ratio Liquid Ratio
- Solvency Ratio: debt to equity, Total Assets to debt proprietary Ratio.
- Activity Ratio: Inventory Turnover, Debtors Turnover, Working Capital Turnover.
- Profitability Ratio: Gross Profit Operating Ratio.

Text Books

Analysis of Financial statement by T.S. Grewal

Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 10 marks.
2. There will be six questions of 5 marks each, out of which four questions are compulsory. The questions will be two from each unit. It will be compulsory to attempt one question from each unit and the third and fourth question can be attempted from any unit.

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MSGMT208-18

STATISTICS FOR APPAREL MANUFACTURING

Objective:

The objective of the course is to familiarize the participants with the basic tools of statistics. The main emphasis will be on the application of these tools in managerial decision making, especially with respect to the production and other related functions in garment manufacturing.

Course Contents:

UNIT-1

1. Presentation and analysis of statistical data – Bar & column graphs, pie Charts, histograms, Ogives, Lorenz Curve.
2. Measures of Central Tendency and dispersion: Mean, Median, Mode, range, Mean deviation.

UNIT-2

3. Standard deviations, coefficient of Variations.
4. Correlation & Regression.

UNIT-3

5. Probability Theory and Distributions, Theorem of Addition and Multiplication.

UNIT-4

6. Theory of Sampling and Sampling Distributions – Mean, Differences of Means, Differences of proportions.
7. Binomial and Poisson distribution

Suggested Readings:

1. Chou, Ya- lun: Statistical Analysis: Holt, Rinchart and Winston, New York 1976.
2. Gupta S.P and Gupta M.P.: Business Statistics, Sultan Chand and Sons, New Delhi, 1986.
3. Levin R.T.: Statistics and management Prentice Hall New Delhi, 1984.
4. Loomba N.P.: Management – A Quantitative Perspective, Macmillan Pub. Co., New Delhi 1978.
5. Markland R.E.: Topics in Management Science, John Wiley & Sons New York, 1983.
6. Stevenson W.J.: Business Statistics – Concepts and Applications, Harpar and row, New York, 1978

Note:

Instructions for External Examiner:

The question paper shall be divided in four units. Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit. All questions will carry equal marks.

MSGMT209-18

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GARMENT CONSTRUCTION

Objective:

This course further imparts advanced technical skills required for garment construction with special emphasis of comparative study of methods in terms of their impact on operator skill level, type of sewing machine and work aid to be used, operation cycle time and quality level.

Course Contents:

UNIT-1

Different methods of zipper applications and closures.

- i) Centered
- ii) Lapped
- iii) Invisible
- iv) Open ended
- v) Fly- front

Mounting of Sleeve

- i) Direct attachment
- ii) Round attachment

UNIT-2

TYPES OF CUFF

- i) Square shape
- ii) Round shape

TYPES OF COLLAR

- i) Mandarin
- ii) Convertible
- iii) Tie collar
- iv) Shawl collar
- v) Roll collar
- vi) Revere collar and Notch collar (Term garment Shirt)
- vii) Lapel construction
- viii) Yoke Attachment
 - a) Patch
 - b) Concealed

UNIT-3

Waist band applications.

- i) One piece waist band.
- ii) Waist band with facing.

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iii) Contour waist band.

iv) Elastic insertion and application

Shirt (term garment)

References:

1. Mary Mathews, 'Practical clothing construction' Thomson &co., madras, 1974.
2. Cock V., 'Dress Making Simplified' Black science, 1987
3. Patrick taylor J., Marti shoben M, 'grading for the fashion Industry' Stanley Thomas (publishers) Ltd.1990
4. Cartis Irving E., 'Fundamentals principles of pattern making for misses and women's garments' New York, FIT, 1987
5. Handrod Jack ., 'Professional pattern grading for women's, men's and children's apparel', redendo benchplycon press,1980
6. Erwin M.D. and Kinchen,' Clothing for moderns' McMillan company New york 1970
7. Dangaji and desh panda .,'Basic process and clothing construction orient' longnians,1970
8. Lang R.M., and Webster J., 'stitches and seams', The textile institute 1998

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MSGMT210-18

PATTERN MAKING AND GRADING

- In the Second Semester students are expected to have thorough understanding of the patterns ie. Construction of permanent patterns and working patterns of the upper torso, Semi Fit and Loose Garments.
- Sleeves: Set-In Sleeves.
- Basic Sleeve Block Development, Sleeve variations:
- Puff Sleeve,
- Leg-o-mutton sleeves, Lantern Sleeve
- Juliet Sleeve
- Shirt Sleeve.
- Students are required to fix sleeves in the garment they have constructed and see for proper hang and fitting.
- Collars: Set-in collars, Band collar and variations. Peter Pan collar and variations Sailors collar and variations, Shirt Collar.
- From the dart less block and block with darts students are expected to make gents shirt and gent's shirt for ladies respectively.
- They are required to make, Yoke, Button Placket, cuffs and sleeves.
- Students are required to test fit the shirt for proper fall and fit
- By the end of the semester students should have a thorough understanding of upper torso garments ie. Dart less garments and garments with darts and also understand attaching sleeves and collars
- They are also required to have understanding of permanent and working patterns.

REFERENCE BOOKS

- 1) "Pattern making for fashion design", Helen Joseph Armstrong, Harper Collins, LA.
- 2) "Metric Pattern Cutting for Menswear"; Winfred Aldrich, BSP Professional book Oxford.
- 3) "Pattern making and making up-the professional approach"; Marten Shoben and Janet P.Ward, Butterworth Heinman, Oxford.
- 4) "Modern sizing for women's and children's"; P.Kunick , Philip Kunik Publication London.
- 5) "Dress Fitting"; Natalie Bray, Black well science Ltd London.
- 6) "Dress Patten Designing" Natalie Bray, Black well science Ltd London.

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MSGMT211-18

GRAPHIC DESIGN AND APPLICATIONS

Course Description:

This course is aimed at students and design professionals who are interested in learning how to design, print using Photoshop. To create, capture and enhance the images in accordance with the final objective. It is a bitmap based graphic designing program that designers use to create professional artwork or advertisements. In this course, students will explore the advanced features available with Photoshop including advanced text, color, layout and layers styles.

Objectives:

- Learn how to manipulate, edit, and adjust images by using, the different tools in Photoshop. Students will learn how to apply layer effects and filters to create special effects, including lighting and texture effects.
- To show advanced skills in using painting tools and blending modes to create special effects and quality artworks.
- Perform good skill in color correction and restoration of photographs and images.
- To learn how to optimize images for use on the Web, and the advantages of using image slicing techniques.
- Demonstrate basic skills in developing a time-based production

Duration-6 months

One class per week of 3 hrs.

Examination /Evaluation scheme

- **Practical Examination:** One Practical examination of 3 hours duration will be conducted on the modules described in the curriculum. The maximum marks will be 100.

Note: All topics are covered in extreme detail with practical examples for all.

Unit-I

Introduction To Adobe Photoshop, Opening new files, Opening existing files, exploring the Toolbox, Exploring Panels & Menus, Creating & Viewing a New Document, About Photoshop, Navigating Photoshop, Working with Images and Basic Selections, Working with Multiple Images, Rulers, Guides & Grids, Adjusting Color with the New Adjustments Panel, Getting Started With Layers And Painting Commands, Understanding the Background Layer, Creating, Selecting, Linking & Deleting Layers, Introduction to Blending Modes

Unit-II

Photo Draping In Adobe Photoshop, Photo Draping Basics, Using a Wrap tool to Photo, Photo Draping a garment/dress with Blending modes, Photo Draping a Bed, Painting In Photoshop Using the Brush Tool, Working with Colors& Swatches, Creating & Using Gradients, Creating & Working

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with Brushes, Photo Retouching And Color Correction, Using Quick Mask Mode And The Pen Tool, Working With Colors And Color Settings, Working with the Color palette, Using the Color palette, Editing Foreground color and Background color, Using the Color ramp, Setting the CMYK Color gamut, Creating Special Effects , Getting Started with Photoshop Filters, Smart Filters ,Creating Text Effects, Applying Gradients to Text.

Unit-III

Introduction to Corel draw, Exploring the CorelDraw Screen, Inserting and Deleting Pages, Changing Page, Customizing Options, Using Multiple Workspaces, Creation and manipulation, Drawing and Shaping Tools, Using the Freehand Tool, Drawing Lines and Polylines, Working With Special Effects And Texts, Drawing With the Artistic Media Tool, Shaping an Object with an Envelope, Extruding an Object, Blending Two Objects, Using the Lens Effect, Adding Perspectives, Using Power Clips

Unit-IV

Working With Paragraph, Importing and Sizing Paragraph Text, Flowing Text Between Frames, Formatting Paragraph Frames, Wrapping Paragraph Text Around Objects, Applying Drop Caps, Typing Text Into Objects, Special Text Effects, Fitting Text to a Path Working With Colors, Fills, & Outlines, Color Palettes, Fills & Outlines, Eyedropper Tool Smart Fill.

Suggested Books

1. Microsoft office 2010 for Dummies, “Wallace Wang”, Wiley India Pvt. Limited, 2010.
2. Coreldraw X5 In Simple Steps ,”Kogent Learning Solutions Inc”, Wiley India Pvt. Limited, 2011.
3. Photoshop Cs2 (savvy), By Romaniello

SYLLABUS
THIRD SEMESTER

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MSGMT301-18

APPAREL PRODUCTION CONTROL AND COMPUTER INTEGRATED MANUFACTURING SYSTEM

Course Objectives:

1. To present the scope, functions and responsibilities of production control as it relates to the apparel industry.
2. To describe the techniques and procedures used to achieve production control objectives.
3. To develop skills in utilizing and applying techniques of production control.
4. Given specific apparel problems, the students should be able to apply the skills to develop the problem solutions.
5. The student should be able to design and implement a complete production control system for production of sewn products.

UNIT-1

1. Production Planning and control general introduction & Computer based Production management
 - a) Stages of Product Development
 - b) Function of production control
 - c) Production analysis quality specifications
 - d) Production analysis quantitative production
 - e) Scope of manufacturing activity
 - f) Coordinating departmental activities.
 - g) Types of control forms
 - h) Basic production system
 - i) Principles of choosing a production system
 - j) Evaluating production system

UNIT-2

2. Group Technology and Cellular Manufacturing
 - a) Parts classification and part coding – approaches and systems
 - b) Benefits of group technology
 - c) Cellular manufacturing-basics, layout considerations
 - d) Cell formation approaches and evaluation of cell designs
 - e) Planning and control in cellular manufacturing
3. Materials Handling and Storage
 - a) Automated Material handling systems-AGVs, -types design features, guidance and control systems.

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- b) Automated storage and retrieval system (ASRS)-components, design features and applications.

UNIT-3

4. Flexible Manufacturing Systems
 - a) FMS and its Components
 - b) Layout considerations in FMS
 - c) Benefits of FMS
5. Operation Time Analysis
 - a) Use of Time Study Data.
 - b) Use of Standard Data.
 - c) Use of Pre-Determined Tie System (SPD)

UNIT-4

6. Bundle Tickets
 - a) Guidelines for Bundle Ticket Design.
 - b) Functions of Bundle Ticket.
 - c) Bundle Ticket Control.
7. Scheduling
 - a) Principles of Scheduling.
 - b) Scheduling Charts.
8. Sales Forecasting in the Apparel Industry
 - a) Types of Forecasts.
 - b) Uses of Forecasts.
 - c) Statistical Inputs for Forecasting.
 - d) Forecasting Techniques.

References:-

1. A.J. Chuter., "Introduction to Clothing Production Management", Blackwell Scientific Publications
2. Carr.H, Latham. B., "The Technology of Clothing Manufacture ", Blackwell Scientific Publications
2. Jacob Solinger., "Apparel Manufacturing Handbook ", VanNostrand Reinhold Company (1980).
3. Gerry cooklin, "Introduction to Clothing Manufacture", Blackwell Scientific Publications
4. Singh, Nanua, "Systems Approach to Computer Aided Design and Manufacturing", John
5. Wiley and Sons
6. Introduction to Work Study - ILO, 1987.

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Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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MSGMT302-18

FABRIC & GARMENT FINISHING

Course Objectives:

The object of the course is to impart adequate input of the finishing of fabric and garment to the students. Since finishing is one of the most important areas of the final product, good understanding of the various finishes and their application techniques is becoming increasingly important especially to compete in the international market.

Unit – 1

1. Objective of Finishing
2. Classification of finishes
3. Various terms used in finishing of fabric & garment.
4. Detailed description of various mechanical finishing operations
5. Resin finishing

Unit – 2

1. Finishing of wool.
2. Finishing of silk
3. Functional Finishes
4. Finishing of garments

Unit – 3

1. Spotting & Washing Of Garments
 - a) Identification of stains, characteristics & history.
 - b) Factors for spotting.
 - c) Methods of spotting
2. Pressing
 - a) Reasons for pressing.
 - b) Pressing equipment's, conditions.
 - c) Types of pressing.
3. Packaging & Folding
 - a) Criteria for packaging.
 - b) Specification & standards for packaging.
 - c) Material & equipment used for packaging.
 - d) Considerations for packaging & folding.

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M.Sc. (GMT) Batch 2018 onwards

Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 20 marks.
2. There will be six questions of 10 marks each, out of which four questions are compulsory. The questions will be two from each unit.
3. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

References:

1. Hall , A.J., " Textile Finishing ", Elsevier Publishing Co. Ltd., 1986.
2. Marsh, J.T., "An Introduction to Textile Finishing ", Chapman and Hall Ltd., London, 1979.
3. Shenai, V.A., "Technology of Textile Finishing", Sevak Publications, Bombay, 1995.
4. Garment wet processing technical manual AATCC/SDC 1994

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MSGMT303-18

APPAREL MARKETING AND MERCHANDISING

Theory & practical

Course Objectives-

To acquaint students with marketing process so that they can correlate theory with practical aspect of marketing.

Unit 1

1. Introduction, Meaning, nature, functions, importance, marketing environment
 - Definitions of Marketing, Concept of Marketing
 - Marketing Mix
 - Segmentation
 - Targeting
 - Positioning
2. Analysis of consumer markets and buyer behavior
3. Criteria consumers use in fashion selection.
4. Consumer identification with fashion life cycle.
5. Merchandising the fashion life cycle.
6. Understanding consumer behavior- buyer black box
7. Role of the Digital marketing (internet): technological development, development of ecommerce, different commercial models, and diverse roles of websites.

Unit 2

8. Product Mix, Product Life Cycle, New Product Development
9. Residents buying offices- definition, types
10. Merchandising- definition, role and responsibilities of a merchandiser
11. 6 months merchandising plan-buying calendar
12. Merchandising policies

Unit 3

13. Retail fashion promotion – sales promotion, advertising, branding, public relation, special events
14. Retailing- types of retail operations.

Unit-4

15. Concepts and Principles -Introduction to packaging and packaging principles.
16. Materials used for packaging in Apparel industry-

Suggested Books:

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1. Chaffey, Mayer, Johnston, Ellis-Chadwick (2000) Internet Marketing, Prentice Hall.
2. Hagel, J and Singer M. (1999) Net Worth, McKinsey.
3. Hanson, W. (1999) Principles of Internet Marketing, International Thomson Publishing
4. Reedy, Schullo, Zimmerman, K. (2000) Electronic Marketing, Dryden.
5. Apparel manufacturing handbook-Jacob Solinger
6. Essentials of Marketing – Jerome E. McCarthy & William D. Perrault
7. Principals of Marketing – Philip Kotler 11th edition
8. Essentials of Marketing – Stanton & Futrell
9. Fashion Innovation & Marketing – Catherine Moore

Instructions to the teacher: Field trip to famous malls and assignment based on consumer survey.

Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 20 marks.
2. There will be six questions of 10 marks each, out of which four questions are compulsory. The questions will be two from each unit.
3. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

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MSGMT304-18

COSTING OF APPAREL PRODUCTS

Objective- to make students understand costing concepts and competitive edge in the market scenario by means of cost control.

Unit 1

1. Costing- definition, advantages ,importance
2. Cost terminologies- bonded warehouse, CIF, FOB, counter sample, duty, overseas shipping, storage cost, air freight, air express etc.

Unit 2

3. Merchandising mathematics- mark ups and mark downs-
4. Costing factor- rent ,labor, operating cost, utilities , capital depreciation
5. Various departments of costing- administration, sales, production etc.

Unit 3

6. Elements of cost- direct and indirect.
7. Costing of a garment- shirt and trouser.

References-

1. Fashion for Profit: From Design Concept to Apparel Manufacturing .- By Frances Harder
2. Apparel Manufacturing: Sewn Product Analysis, 4/E By Glock Ruth E., Glock
3. Costing for the Fashion Industry By Michael Jeffrey, Nathalie Evans
4. Instructions to the teacher: Field trip to a dyeing and printing unit will be taken.

Instructions to the examiner:

1. There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 20 marks.
2. There will be six questions of 10 marks each, out of which four questions are compulsory. The questions will be two from each unit.
3. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

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MSGMT305-18

RESEARCH METHODOLOGY

Objective

The Objective of the course is to expose the students to the business research procedures and apprise them with the basic tools of research methodology. The greater stress should be laid on business problems pertaining to marketing, finance, production and personal areas.

UNIT-1

Introduction; meaning and nature of research; significance of research in business decision making, identification and formulation of research problem and setting objectives.

UNIT-2

Research design and data collection; research designs – exploratory, descriptive, diagnostic and experimental data collection; universe, survey population, sampling and sampling designs. Data collection tools- schedule, questionnaire, interview and observation, use of SPSS.

UNIT-3

Test of Hypotheses: Z test, t test, chi (x) square test and analysis of variance.

UNIT-4

Interpretation and report writing; introduction, meaning of interpretation, techniques and precautions in interpretation and generalization report writing- purpose, steps and format of research report and final presentation of the research report.

References:-

1. Boyd, Harper W., Ralph Westfall, Stanly F. Starch (1990). Marketing Research Text and Cases Delhi; Richard D. Irwin In., AITBS
2. Cooper, Donald R, Pamela S. Scndler (1998) Business Research Methods (6th Ed.) New Delhi: Tata McGrew Hill Publishing Co.
3. Goode, William and Paul, K. Hatt (1952) Methods in Social Research Tokyo: McGraw Hill.
4. Gopal, M.H. (1970) An Introduction to Research Procedure in Social Sciences Bombay: Asia Publishing House.
5. Johari, J.C. (1988) Introduction to the Methods of Social Sciences. New Delhi: Sterling Publishers.
6. Kothari, C.R. (1990) Research Methodology – Methods and Techniques 2nd Ed. New Delhi: ViswaPrakashan
7. Majumdar, Ramanuj (1991) Marketing Research Text, Applications and Case Studies. New Delhi: Wiley Eastern Edition.

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MSGMT306-18

MANAGERIAL ECONOMICS

The purpose of this course is to apply Micro-economic concepts tools and techniques in evaluating business decisions taken by a firm. Short case studies will be used to ensure problem solving ability of corporate managers.

UNIT-1

1. Introduction to Managerial Economics:

- a) Nature and Scope of Managerial Economics
- b) Relationship of Managerial Economics with:
- c) Economic Theory
- d) Decision Sciences
- e) Statistics
- f) Optimization technique & Operations research
- g) Characteristics of Managerial Economics
- h) Managerial Economics role and responsibilities.

2. Basics of Demand and Supply:

- a) Demand Function: Determinations of demand for a product; Law of Demand, Demand Elasticity (concepts, methods of measurement, factors affecting and importance), Market demand for a product.
- b) An introductory analysis of Surveys and Statistical methods of demand forecasting.
- c) Supply Function: Determinants of Supply of a commodity; concepts of Market Period, Short and Long period Supply Curve, Elasticity of Supply.
- d) Equilibrium Price Determination. Govt. intervention in terms of fixation of Ceiling and Floor prices; Emergence of black market and necessity of physical quota fixation/Rationing; Effects of imposition of an excise duty/sales tax/grant of subsidy to sellers on the product's price.

UNIT-2

3. Consumer Demand Theory:

- a) Consumer preference ordering (Weak & Strong) and consumer Equilibrium
- b) Analysis of Substitution and Income Effects and derivation of Consumer demand Curve

4. Production and Cost Analysis:

- a) Concept of a production function; Short run production analysis and law of variable proportions; concepts of Average and Marginal Physical.
- b) Productivities and their interrelationships.
- c) Long run production analysis and law of Returns to Scale. Concept of isoquants and producer's equilibrium in the factor market.
- d) Cost of Production: Concepts; short & long run cost analysis.
- e) Empirical estimation of Production and Cost functions.
- f) Break-even Analysis.

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UNIT-3

5. Objectives of the Firm:

- a) Profit maximization and its critique.
- b) Sales Maximization model of the firm; Comparison of Price, Output, Profits and Advertisement determination under profit and sales maximization models of the firm.

6. Pricing and Output Decisions under Alternative Market Structures:

- a) Determinants of a Market Structure and classification of market structures based on them.
- b) Pricing in a Competitive industry and Equilibrium of a Firm in Short & Long Run.
- c) Monopoly: Price-Output determination in Short & Long Run. Price Discrimination.
- d) Monopolistic Competition: Price-Output and Selling cost Determination in the short and long run by a firm
- e) Oligipolistic interdependence; Cournot's Model, Price Rigidity; Kinked Demand Curve model
- f) Pricing in practice: Cost plus pricing, multiple product pricing, Pricing in life cycle of a product.

UNIT-4

7. Capital Budgeting:

- a) Meaning and significance of Capital Budgeting;
- b) Classification of investment projects. Public and Private investment decisions
- c) Investment Criteria; Payback, Internal rate of return and Net present value Methods of Investment Evaluation.
- d) Social Cost Benefit Analysis.

Suggested Text Book

1. Baumol, W.J. Economic Theory and Operations Analysis (1980), Prentice Hall on India. N. Delhi
2. Adhikary, M. Managerial Economics (200), Excel Books, N. Delhi
3. Koutsoyiannis, A. Modern Microeconomics, (Second Edit.) 1979, ELBS/Macmillan
4. Mukherjee, S. Business & Managerial Economics (1996), New Central Book Agency (P) Ltd., Calcutta
5. Davis, J.R. & Principles of Managerial Economics (1996), Chang, Simon. Prentice Hall International, N. Delhi.
6. Ahuja, H.L. Business Economics, (1999), S. Chand & Co. N. Delhi.

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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MSGMT307-18

HUMAN RESOURCE MANAGEMENT

Course Objective:

- To help students understand, appreciate and analyze work force at the managerial and non-managerial levels.
- The course also facilitates learning of various concepts, new trends and skills required for Planning, managing and development of human resources for organizational effectiveness.

Course Content

UNIT – I

1. Introduction of HRM:

HRM – Definition, Concept, Scope, Models, Importance. Role of HR Executives- HRM Functions, Challenges in HRM, Modern Day challenges of HR Executives, Organization Structure and its types.

UNIT - II

2. Job Analysis and Design:

HRM Environment and Environmental Scanning. Concept of Job Analysis and Design, Methods of Job Analysis, Job Description, Job Specification

Modern Management Techniques: Job Rotation, Job Enlargement, Job Enrichment. Managing the De-jobbed world, Competency mapping.

3. Human Resource Planning (HRP):

Human Resource Planning – Need, Importance, Process. Levels and Types of HRP.

Techniques for forecasting demand and supply for employees, Gap analysis between supply and demand and HRP Models. Managing ethical issues in HRM, HRD audit.

UNIT - III

4. Recruitment and Selection Process.

Recruitment– Definition, Process.

Factors Affecting Recruitment, Sources of recruitment, Modern Techniques of recruitment.

5. Recruitment Policies. Selection – Definition, Process, Steps involved in Selection Procedure. Various types of Test involved in Selection. Types of Interview: Methods, Process (including reference check and medical examination). Differences between Recruitment and Selection, Placement and induction, Competency testing systems.

UNIT - IV

6. Performance and Potential Appraisal.

Performance Appraisal- Concept, Objectives, Appraisal Process, Need, Importance.

Methods - Traditional & Modern Methods of Appraisal (including MBO, 360 degree, Assessment Centre, Balanced Scorecard, etc), Pitfalls in Performance Appraisal-Potential appraisal, Global Practices in HRM: e-HRM/HRIS

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References-

1. Aswathappa, Human Resource Management, Tata McGraw-Hill.
2. Bratton, J. and Gold, J., Human Resource Management: Theory and Practice, Palgrave.
3. Flippo, E., Human Resource Management, McGraw Hill.
4. Gomez-Mejia et al., Managing Human Resources, Pearson Education.
5. Ivantsevich, Human Resource Management, Tata McGraw-Hill.
6. Kandula, S.R., Human Resource Management in Practice, Prentice Hall of India Pvt. Ltd.

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit and 5th question from any of the units.
- All questions will carry equal marks.

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M.Sc. (GMT) Batch 2018 onwards

MSGMT/FMM/CA308-18

INTRODUCTION TO COST ACCOUNTING

UNIT - I.

Nature & Scope of Cost Accounting

- Introduction
- Meaning of Cost Accounting
- Limitations of Financial Accounting
- Scope of Cost Accounting

Cost – Analysis, concept & classification

- Cost Sheet along with the treatment of stock
- Cost concepts – Cost Centre, Profit Centre

UNIT - II.

Material Control

- Techniques of Material Control
- Level Setting
- Just In time Inventory
- VED analysis
- EOQ
- ABC analysis
- Perpetual Inventory Control
- FNSD Analysis

UNIT-III

Materials Costing

- Methods of Valuing Material Issues (FIFO, LIFO, Average Cost)
- Material Losses – Theory of Waste, Scrap, Defectives & Spoilage

Text Book

1. Practical Problems in cost Accounting by S.P. Jain & K.L. Narang

Instructions to the examiner:

There will be one compulsory objective question (multiple choice questions or fill in the blanks or True/False questions) covering all units, carrying 10 marks. There will be six questions of 5 marks each, out of which four questions are compulsory. The questions will be two from each unit. It will be compulsory to attempt one question from each unit and the fourth question can be attempted from any unit.

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MSGMT309-18

GARMENT CONSTRUCTION

Objective:

To develop skills and methods in the area of apparel construction. Develop efficient and quality construction techniques in the sewing room. To develop several types of seam finishes using attachments.

UNIT-1

1. Skirt Construction
 - a) Waist band application
 - b) Concealed zipper application
 - c) Inseam pocket
 - d) Roll hem
2. Trouser
 - a) Front and side pockets
 - b) Fly front
 - c) Back and hip pocket
 - d) Waist band
 - e) Belt loops

UNIT-2

3. Waist coat
 - a) welt pocket
 - b) Slit/vent formation
 - c) Shoulder pad construction.
 - d) French lining/full lining application.
4. Transfer patterns on to fabric.

UNIT-3

5. Construction reports.
6. Choose appropriate machines / equipment for production.
7. Presentation of Reports.

References:

1. Mary Mathews, 'Practical clothing construction' Thomson & co., madras, 1974.
2. Cock V., 'Dress Making Simplified' Black science, 1987

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3. Patricytaylor J., Marti shoben M, 'grading for the fashion Industry' Stanley Thomas (publishers) Ltd.1990
4. Cartis Irving E., 'Fundamentals principles of pattern making for misses and women's garments' New York, FIT, 1987
5. Handrod Jack., 'Professional pattern grading for women's, men's and children's apparel', redendo bench plycon press,1980
6. Erwin M.D. and Kinchen,' Clothing for moderns' McMillan company New york 1970
7. Dangaji and deshpanda.'Basic process and clothing construction orient' longnians, 1970
8. Lang R.M., and Webster J., 'stitches and seams', The textile institute 1998

Practical Examination:

One Practical examination of 3 hours duration will be conducted on the modules described in the curriculum. The maximum marks will be 100.

Note:

All topics are covered in extreme detail with practical examples for all.

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MSGMT310-18

INDUSTRIAL PATTERN MAKING AND GRADING

In the third semester students will be given a thorough understanding of lower body garments.

UNIT-1

- Developing production patterns.
- They will also be taught the principles of grading- Three dimensional grading
- Track grading. Grown on collars Grown on sleeves.

UNIT-2

- The principles of joining upper and lower body garments to form a dress.
- Developing a prototype of the dress and check for fall and fit on the dress form.
- Skirts: Fitted skirt

UNIT-3

- Flared skirt 1 skirt with yoke (basque) Peg skirt and
- Bell skirt (with Gores 1 Godets)
- Developing a prototype of at least one category each.

UNIT-4

- Bifurcated Garments
- Trousers
- Production pattern of trouser complete with all components
- Waist coat

REFERENCES:

1. "Pattern making for fashion design", Helen Joseph Armstrong, Harper Collins, LA.
2. "Metric Pattern Cutting for Menswear"; Winfred Aldrich, BSP Professional book Oxford.
3. "Pattern making and making up-the professional approach"; Marten Shoben and Janet P.Ward, Butterworth Heinman, Oxford.
4. "Modern sizing for women's and children's"; P.Kunick, Philip Kunik Publication London.
5. "Dress Fitting"; Natalie Bray, Black well science Ltd London.
6. "Dress Patten Designing" Natalie Bray, Black well science Ltd London.

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Practical Examination:

One Practical examination of 3 hours duration will be conducted on the modules described in the curriculum. The maximum marks will be 100.

Note:

All topics are covered in extreme detail with practical examples for all.

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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MSGMT311-18

CAD (PATTERN MAKING & GRADING)

Contents

UNIT-1

1. Introduction
2. Design System Tools

UNIT-2

3. Principles of X and Y Vectors
4. Points and Lines: Measuring and changing line lengths, moving lines, Cutting and drafting lines, rotating lines, Mirroring lines, Moving internal lines.

UNIT-3

5. Darts; Add darts, Manipulate darts, designer darts.
6. Facings: Fold out facings.
7. Drills, notches and seams

UNIT-4

8. Grading
9. Marker Making: Marking system tools

REFERENCES:

- 1) "Pattern making for fashion design", Helen Joseph Armstrong, Harper Collins, LA.
- 2) "Metric Pattern Cutting for Menswear"; Winfred Aldrich, BSP Professional book Oxford.
- 3) "Pattern making and making up-the professional approach"; Marten Shoben and Janet P.Ward, Butterworth Heinman, Oxford.
- 4) "Modern sizing for women's and children's"; P.Kunick , Philip Kunik Publication London.
- 5) "Dress Fitting"; Natalie Bray, Black well science Ltd London.
- 6) "Dress Patten Designing" Natalie Bray, Black well science Ltd London.

Practical Examination:

One Practical examination of 3 hours duration will be conducted on the modules described in the curriculum. The maximum marks will be 100.

Note:

All topics are covered in extreme detail with practical examples for all.

SYLLABUS
SEMESTER IV

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M.Sc. (GMT) Batch 2018 onwards

MSGMT401-18

APPAREL PRODUCT ENGINEERING & PLANT LAYOUT

Objective:

1. To analysis the basic principles of effective plant location layout and design as they apply to the needle trades industry.
2. To draw upon specialized knowledge from a number of disciplines including engineering architecture business management and economics, as they relate to plant engineering and factory layout.
3. To utilize these principles and disciplines to develop and design a multi project apparel plant layout.

UNIT-1

Introduction

- A. The purpose and importance of facility design
- B. Type of layout problems.
- C. Stable vs. changing products and styles.
- D. Plant locations.

Preliminary Analysis

- A. Step in planning a plant layout
- B. Product Analysis
 1. Parts list
 2. Assembly chart
 3. Grid
- C. Production Systems.
 1. Whole garment
 2. Section
 3. Progressive bundle

Machinery Manpower and Space Requirements

- A. Factors for selection machinery and space requirement.
- B. Calculation of number of machines required.
- C. Calculation of number of operators required.
- D. Calculation of building space requirements
- E. Balancing production lines.

UNIT-2

Materials Flow

- A. General plant patters

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1. Process
2. Product
3. Group
4. Basic flow patterns
5. Methods of data collection

Relationship of Activities to Physical Plant Services

A. Types of activity

1. Stores
2. Health
3. Safety
4. Feeding
5. Convenience related services

B. The activity relationship chart

Operation and Work Area Planning

A. Work area planning

B. Templates

C. Aisle Development

Introduction to Materials Handling

A. Objective of materials handling.

B. Methods of classifying materials and handling equipment.

C. Descriptions and characteristics of material handling equipment.

UNIT-3

Materials Handling II

A. Specialized materials handling equipment related to the apparel industry.

B. Drafting techniques.

C. Plant measurement methods.

Electricity

A. Circuits

B. Materials

C. Insulation

D. Wiring methods

Light and Lighting

A. Computation

B. Cost

C. Quality

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Building Structures

- A. Walls
- B. Floors
- C. Paints

UNIT-4

Presenting the Layout

- A. Layout preparation and reproduction
- B. Presenting the layout to management
- C. Installing the layout
- D. Follow-up

Environmental Comfort

- A. Plumbing
- B. Heating
- C. Steam System
- D. Sewage disposal

Plant Machinery and Equipment

- A. Cutting Equipment
- B. Sewing Machinery
- C. Finishing Equipment
- D. Air Compressors and Vacuum Devices
- E. Maintenance

References:-

1. "Plant layout and materials handling ", 3rd Edition by James M. Apple, John Wiley and Sons, 1977.

Optional Additional Reference.

2. "Mechanical and Electrical Equipment for Buildings:" 5th Edition by McGuinness & Stein, John Wiley and Sons, 1971.

Note:

Instructions for Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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MSGMT402-18

TRADE DOCUMENTATION

UNIT-1

1. GATT – What it is and what it does.
2. Multi fiber Agreement and bilateral Textile Agreements signed by India with importing quota countries.
3. Govt. of India's export entitlement policy on garment exports.

UNIT-2

4. AEPC role in the administration of export entitlement policy.
5. Export promotional activities of A.E.P.C.
6. Facilities available for garment exporters.
 - a) Cash Compensatory Support.
 - b) Duty draws back.
 - c) Export finance through banks.
 - d) Export credit Guarantee Corporation.
 - e) Export – Import Bank.
 - f) Market Development Assistance.
 - g) 100% Export Oriented scheme of the Govt. of India.
 - h) Free Trade Zones.

UNIT-3

7. How to start a Garment Exporting Company?
8. Export contracts.

UNIT-4

9. Documents connected with exports.
10. Exchange control regulations relating to exports.

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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M.Sc. (GMT) Batch 2018 onwards

MSGMT/FMM/EDPIPR403-18

ENTREPRENEUR DEVELOPMENT PROGRAMME & INTELLECTUAL PROPERTY RIGHTS

Objectives:

The main aim of the subject is on developing entrepreneurship skills in participants by Preparing them for the competencies required and to have basic knowledge of intellectual property rights. The course also aims at giving insights into the Management of Small Family Business.

UNIT-1

- 1) Entrepreneurship: Concept and Definitions, Entrepreneurship and Economic Development, Classification and Types of Entrepreneurs, Entrepreneurial Competencies, Factor Affecting Entrepreneurial Growth -EDP Programmes, Entrepreneurial Training, Traits/Qualities of an
- 2) Entrepreneurs,

UNIT-2

- 3) Small Enterprises and Enterprise Launching Formalities: Definition of Small Scale, Rationale, Objective,
- 4) Scope, Role of SME in Economic Development of India, SME, Registration, NOC from Pollution Board,

UNIT-3

Ownership and Enforcement of Intellectual Property Rights

- 5) Patents-Objectives, Rights, Assignments, Defenses in case of infringement 2. Copyright-Objectives, Rights, Transfer of Copyright, work of employment Infringement, Defenses for infringement
- 6) Trademarks-Objectives, Rights, Protection of goodwill, Infringement, Passing off, Defenses.

UNIT-4

- 7) Designs-Objectives, Rights, Assignments, Infringements, Defenses of Design Infringement
- 8) Enforcement of Intellectual Property Rights - Civil Remedies, Criminal Remedies, Border Security Measures.
- 9) Practical Aspects of Licensing -Benefits, Determinative factors, important clauses, licensing clauses.

Suggested Readings:

1. D.F. Kuratko and R.M. Hodgetts: Entrepreneurship - Theory, Process and Practice, Thomson Press.
2. J.S. Saini: Entrepreneurship and Small Business in India, Himalaya Publishing House.
3. P. Charantimath: Entrepreneurship Development: Small Business Enterprises, Pearson Education.
4. Vasant Desai: Small-Scale Industries and Entrepreneurship, Himalaya Publishing House.

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5. Otes David: A Guide to Entrepreneurship, Jaico Books Publishing House.
6. D.H. Holt: Entrepreneurship – New Venture Creation, Prentice Hall India.
7. A. Kaulgud: Entrepreneurship Management, Vikas Publishing House.
8. B. Theduri: Entrepreneurship Development – An Analytical Study, Akansha

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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M.Sc. (GMT) Batch 2018 onwards

MSGMT404-18

PROJECT MANAGEMENT

UNIT-1

PLANNING – Overview, Generation and Screening of Project Ideas, Source of Finance.

UNIT-2

ANALYSIS – Market and Demand Analysis, Technical Analysis, Detailed--- Report (DFR), Social Cost Benefit Analysis

UNIT-3

APPRAISAL CRITERIA – Payback Period, Accounting Rate of Return, Net Present Value, Benefit – cost Ration, Internal Rate of Return.

UNIT-4

IMPEMENTATION – Project Management – Forms of Project Organization, Project Planning, Project Control, Pre-requisites for Successful Project Implementation.

CASE STUDIES

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

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M.Sc. (GMT) Batch 2018 onwards

MSGMT405-18

INTERNATIONAL FINANCE

UNIT-1

1. Financial Statement Analysis: With particular reference to balance sheet- common size statements, comparative statement and trend ratio.
2. Ratio Analysis: The computation and interpretation of significant financial ratio, liquidity, profitability, solvency and activity ratios, Importance and limitations of ratio analysis.

UNIT-2

3. Project Appraisal: The process of discounting, calculations of cash flows form a project. Alternative techniques of capital budgeting, Payback period, Accounting Rate of Return, Net Present Value, Profitability index and Internal Rate of Return.
4. Trade: Basis for international trade, Theories of international trade, obsolete and comparative advantage. Gains from international trade and their distributions

UNIT-3

5. Exchange Rate: Types of foreign exchange contracts, spot, forward, Future, Swaps and options, causes and effects of foreign exchange rate movements.
6. Hedging: Importance of hedging, alternative methods for protection against exchange rate fluctuations, internal action techniques and External action techniques, Traditional Techniques and modern techniques.

UNIT-4

7. Tax and capital Budgeting considerations is an international setting: Challenges in international capital budgeting. Adjusted Present value method of international capital budgeting.

Note:

Instructions for External Examiner:

- The question paper shall be divided in four units.
- Shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions selecting one question from each unit.
- All questions will carry equal marks.

I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY
M.Sc. (GMT) Batch 2018 onwards

MSGMT406-18

RESEARCH PROJECT

At the end of the examination of 3rd Semester the students are required to carry out a research project for a period of 3-4 months in the final semester and every student is required to submit the Report and presentation at the end during final evaluation.