PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

M.Sc. Home Science (Clothing & Textiles)
(Semester System)
Examinations, 2017 -18
# Outlines of tests, syllabi & courses of reading for M.Sc. Home Science (Clothing & Textile)

1\textsuperscript{st} & 2\textsuperscript{nd} Semester System Examinations, 2017-2018

## SEMESTER-I

<table>
<thead>
<tr>
<th>Code</th>
<th>Paper/Subject</th>
<th>Credit Hours</th>
<th>Theory Marks</th>
<th>Practical Marks</th>
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## SEMESTER-II

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* Marks will be awarded by the supervisor internally on the basis of synopsis/continuous evaluation.
### SCHEME OF STUDIES

Scheme of examination (old scheme) of 3rd & 4th Semesters examination for 2017-18

<table>
<thead>
<tr>
<th>Course Subject No.</th>
<th>Subject</th>
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3rd SEMESTER Exam. Nov./Dec., 2013

4th SEMESTER Exam. April/May, 2014

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<th>Course Subject No.</th>
<th>Subject</th>
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GRAND TOTAL: 64 1600

* No question paper shall be set for this Practical. Marks will be given by the external examiner on the basis of the Presentation.

** There will be no University Examination for this Practical.

**Note:** Students of M.Sc. (Clothing & Textiles) should undergo Industrial Training of Six weeks in an Export House/Readymade Garment Industrial Unit.
SEMESTER I

PATTERN DEVELOPMENT (PRACTICAL)

Credit Hours: 4/ week
Duration of Exam: 4 hours

Instructions to the Examiner:
1. The examiner is required to set 3 questions, internal choice may be given.
2. The paper should be balanced and cover the entire syllabus.

Objectives:
To impart the knowledge about-
1. Pattern development techniques
2. Pattern Development of Garments
3. Grading techniques of paper pattern

1. Measuring anthropometric parameters.

2. Manipulation of basic darts in the bodice into-
   • Multiple darts
   • Princesesline
   • Contouring Patterns:
     – Off shoulder
     – Wrap

3. Style reading of the given five designs.

4. Designing, style reading and pattern development of the following-
   • Skirts: Godet, Gore and Circular
   • One piece dress with halter neck

5. Grading of the basic patterns
   • Bodice block
   • Sleeve block
   • Skirt block

6. Draping of Upper garment-
   • Top with princess line
   • Top with cowl

7. Draping of Yokes-
   • Fitted Midriff
- Bodice Yoke

8. Draping of Lower garment
- Flared skirt

**Recommended Readings:**

**FASHION ILLUSTRATION (PRACTICAL)**

**Maximum Marks: 75**
**Paper- 60**
**Internal Assessment- 15**

**Credit hours: 3 /week**
**Duration of Exam: 4 hours**

**Instructions to the Examiner:**
1. Practical paper will be of 4 hours duration
2. Question paper should cover all the topics

**Objectives:**
To enable students to understand
1. Figure sketching.
2. Line planning on different themes
3. Drawing illustrations using different colour mediums

1. Understanding the Fashion figure
2. Figure Analysis (3 different postures- front, 3/4th profile, side profile)
3. Rendering of following fabric textures on different silhouettes using various colour schemes
   - Silk
   - Velvet
   - Satin
   - Lace
   - Chiffon
   - Leather
• Denim
• Corduroy

4. Line planning of the following themes for fall and spring season.
   a) Kids wear
      • Casual wear
      • Formal wear
   b) Women wear
      • Casual wear
      • Occasion wear
      • Club wear
      • Office wear

5. Illustration of any two designs of the line plan on fashion figure.

6. Developing a design Portfolio.

Recommended Readings:

1. Illustrating fashion by Kathryn Mckelvey & Janine Munslow-

FABRIC SCIENCE (THEORY)

Maximum Marks: 75
Paper- 60
Internal Assessment- 15

Credit hours: 3 /week
Duration of Exam: 3 hours

Instructions to the Examiner:

Question paper will have four sections. Examiner will set a total of nine questions comprising of two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions should carry equal marks.

Objectives:

To understand
• the chemistry of textile fibers
• properties and uses of technical textiles
UNIT-I

- Molecular structure of textile fibers: crystalline and amorphous
- Polymers and its types
- Polymerization – Addition and Condensation Polymerisation
- Intermolecular and Intramolecular forces in polymers
- Physical properties of fibers and their effect on fabric performance; tensile properties, frictional properties, moisture absorption properties, thermal properties, optical properties and electrical properties
- Innovation in fibers – Micro fibers, hollow fibers, nano fibers

UNIT-II

Chemistry of natural fibers - Chemical composition, Structure and groups, Chemical properties
- Cotton,
- Linen
- Jute, Silk
- Wool

Brief study of other natural fibers-
- Pineapple
- Banana
- Palm
- Bamboo
- Hemp
- Sisal

UNIT-III

Chemistry of man-made fibers - Chemical composition, manufacturing process and properties
- Regenerated Cellulosic Fibers
  - Rayon and its types,
- Modified Cellulosic Fibers
  - Acetate
  - Triacetate
- Synthetics
  - Polyester - Terylene.
  - Polyamide – Nylon 6 & 66
  - Acrylic and Modacrylic
  - Olefine - Polyethylene and polyprolene.
  - Spandex

UNIT-IV

Special Textiles - Properties and Use
- Technical textiles
− Industrial textiles
− Medical textiles
− Geo textiles
− Sports textiles
− Agro textiles
− Packaging textiles

• Smart/ intelligent textiles
  − Phase change materials
  − Thermochromic/ photochromic textiles
  − Electronic textiles

• Fabric composites

Recommended Readings:
3. Williams, B.J. Practical Textile Chemistry.

FABRIC SCIENCE (PRACTICAL)

Maximum Marks: 50
Paper- 40
Internal Assessment- 10

Credit hours: 2 /week
Duration of Exam: 4 hours

Instructions to the Examiner:
1. The examiner is required to set 2 questions, internal choice should be given.
2. The paper should be balanced and cover the entire syllabus.

Objectives: To understand
• the identification of various classes of textiles fibers
• the process of analysis of blends

1. Fiber identification
  • Visual Inspection
  • Microscopic Test
  • Burning Test
  • Solubility Test
2. Qualitative and quantitative analysis of blends/ mixture-
   • Terywool
   • Terycot

3. Collection and identification of samples of technical textiles

Note: A visit to technical textiles industry

Recommended Readings:
1. Williams, B.J. Practical Textile Chemistry

APPAREL DESIGNING AND CONSTRUCTION-I (PRACTICAL)

Maximum Marks: 100
Paper- 80
Internal Assessment- 20

Credit hours: 4 /week
Duration of Exam: 4 hours

Instructions to the Examiner:
1. Examiner is required to set one question covering the designing, style reading, pattern development and construction of any one garment.
2. Paper will be of four hour duration.

Objectives:
   To impart knowledge about-
   1. Style reading
   2. Pattern Development and material layout
   3. Various construction details.
1. Designing and style reading of the following:
   • Party frock
   • Jump suit
   • Skirt and Top-(For Adults)

2. Pattern Development, material layout and Construction of the above garments. (one each)

Recommended Readings:
4. Dress Designing by Natale Bray-London Crosby, Lockwood
11. Kiddy design books

RESEARCH METHODOLOGY AND STATISTICS (Common to all streams) (THEORY)

Maximum Marks: 75
Paper - 65
Internal Assessment - 10

Credit Hours: 3 /week
Duration of Exam: 3 hours

Instruction to the Examiner:
1. Each theory paper will be of three hours duration.
2. Questions paper will have four units.
3. A total of Nine questions comprising of two questions from each unit and one compulsory question of short answer type covering the whole syllabus will be set.
4. All questions may carry equal marks unless specified.
5. Students will be expected to attempt one question from each unit and the compulsory question

Objectives:
1. To know the significance of statistics and research methodology in Home Science research.
2. Types, tools, and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
3. To know about the appropriate statistical technique for based on the specific research design.

UNIT- 1

1. Research- meaning, purpose and approaches
   • Exploration, Description, Explanation
• Research designs- Experimental and Observational

2. **Statistics- Scope and Significance in Home Science discipline**
   • Descriptive and inferential statistics
   • Functions and limitations of statistics

   **UNIT-II**

3. **The Research Process**
   • Defining the research problem, research questions, objectives, hypotheses
   • Review of related literature
   • Methodology and tools to be used
   • Citation formats

4. **Sampling and Tools**
   • Universe and sample
   • Types of sampling

   **UNIT-III**

5. **Understanding various statistical measures**
   • Simple Arthimetic Mean (direct method)
   • Median and Mode
   • Standard deviation (assumed mean method)
   • Variance

6. **Conceptual understanding of Correlation and Regression (Theoretical introduction)**
   • Karl Pearson co-efficient of correlation and its properties
   • Regression equation and regression lines

   **UNIT-IV**

7. **Inferential Statistics**
   • Level of significance
   • Standard error and Confidence limits

8. **Large sample and small sample tests**
   • t-test; Significance of difference between means
   • F- test
   • Chi-square test of independence

**Recommended Readings:**


RESEARCH METHODOLOGY AND STATISTICS (Common to all streams)(PRACTICAL)
Maximum Marks: 50
Paper - 40
Internal Assessment - 10

Credit Hours: 2/week
Duration of Exam: 3 hours

Objectives:
1. To provide hands on experience to students about data entry and analysis in Excel and SPSS
2. To familiarise the students with data handling in statistical software.

Contents
1. Basics of Excel- data entry, editing and saving, establishing and copying a formula.
2. Functions in excel, copy and paste and exporting to MS word document
4. SPSS, opening SPSS, layout, menu and icons analyzing the data using different statistical techniques.

Recommended Readings:
Semester II

TEXTILE TESTING (THEORY)

Maximum Marks: 75
Paper: 65
Internal Assessment: 10

Credit Hours: 3/ week
Duration of Exam: 3 hours

Instructions to the Examiner:
Question paper will have four sections. Examiner will set a total of nine questions comprising of two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions should carry equal marks.

Objectives:
To impart knowledge about
1. physical properties of textile fibers, yarns and fabrics
2. various testing equipments and methods

UNIT-I
1. Introduction to textile testing
   a) Objectives of textile testing
   b) Role of Textile Testing in Quality Control
   c) Sampling for testing
   d) Standard atmosphere for textile testing
2. Moisture relations and testing, measurement of moisture content of textiles.

UNIT-II
3. Physical testing of fibers:
   a) Fiber length and length distribution, density and specific gravity, fibers fineness and maturity.
4. Mechanical properties of fibers:
   Elongation, ductility, plasticity, tenacity, stiffness and resiliency.
5. Thermal, electrical and optical properties of fiber.
UNIT-III

6. Physical testing of yarns:
   a) Yarn types and structure,
   b) Twist and twist measurement
   c) Yarn count and diameter determination.
   d) Breaking strength of yarns

UNIT-IV

7. Fabric testing:
   a) Fabric construction analysis: thread count, weight, crimp, thickness.
   b) Porosity, air- permeability and thermal conductivity of fabric.
   d) Mechanical properties of fabrics: - breaking, bursting and tearing strength of fabrics.

9. Serviceability of fabrics

Recommended Readings:


TEXTILE TESTING (PRACTICAL)

Maximum Marks: 75
Paper- 60
Internal Assessment- 15

Credit hours: 3/week
Duration of Exam: 4 hours

Objectives:
To understand the
   Usage of various equipments, to analyze physical properties of textiles

INSTRUCTIONS TO PAPER SETTERS:
1. The examiner is required to set 3 questions, internal choice should be given.
2. The paper should be balanced and cover the entire syllabus

1. Fiber Tests:
   - Fiber Bundle Strength
   - Cotton Fiber Length Distribution

2. Yarn Tests:
   - Structure
   - Yarn Count
   - Breaking Strength

3. Fabric Analysis:
   - Width
   - Count
   - Thickness
   - Weight
   - Crimp

4. Fabric Properties:
   - Breaking Strength & Elongation
   - Bursting Strength
   - Tearing strength
   - Dimensional change in laundering
   - Drape
   - Seam Slippage

5. Colour fastness to:
   - Laundering
   - Crocking
   - Pressing
   - Perspiration
   - Sunlight

5. Visit to textile industry.

**Recommended Readings:**

Objectives:
To enable the students to understand:
1. Fashion Communication
2. Concept of creative writing
3. Role of photography in fashion world.
4. Event management, advertisement and publicity.

UNIT-I
1. Communication:- Definition, concept, scope and functions of communication
2. Mass Communication:-
   • Definition, concept, scope and functions
   • Mass Communication through different media – Electronic media, Print media, Cyber media
3. Role of media in society

UNIT-II
5. Creative writing:-
   • Feature:- Different types of feature, Writing a feature, rules for writing.
   • Article:- Defining Article, rules for writing.
6. Interviews:- Definition, Concept and scope of interviews, types of interview. How to conduct an interview, writing report of interview.
7. Designing catalogues and brochures.
UNIT-III

8. Photography:-
   - Definition, concept and functions of photography
   - Types of camera, camera angles, shots and movements.
   - Role of photography in fashion world

9. Editing:- Definitions, various techniques of editing.

10. Ethics of media.

UNIT-IV

11. Event management: - Fashions shows, photo shoots, outdoor and indoor shoots.
12. Advertising: - Definition, concept, scope, functions and need of advertising in fashion world.
13. Public relations: - Definition, concept, scope, functions and qualities of good PRO. Need of PRO in fashion.
14. Publicity: - Definition and scope, event reporting, concept of image management.

Recommended Readings:


FASHION COMMUNICATION (PRACTICAL)

Maximum Marks: 50
Paper- 40
Internal Assessment- 10

Credit hours: 2 /week
Duration of Exam: 4 hours

Instructions to the Examiner:
1. The examiner is required to set 3 questions, internal choice may be given.
Objectives:
To impart knowledge of Fashion Communication by:-
1. Creative writing
2. Conducting interviews
3. Designing broucher and advertisements.

I) Creative Writing
   • Fashion events/ News reporting
   • Reviewing- Book review and film review
   • Scrap book of current fashion news

II) Interview- Interview of any two personalities from the field of fashion

III) Photography
   • Understanding of camera angles, shots and movements.
   • Develop an album/ Shot book (Indoor and outdoor shoots)
     – Exhibitions (Indoor)
     – Fashion shows (Indoor or outdoor)

IV) Designing of broochure

V) Designing an advertisement on fashion sales, exhibitions or fashion show.

Recommended Readings:
3. Williams John Matt, ‘Business through Correspondence and Advertising’,

APPAREL DESIGNING AND CONSTRUCTION-II (PRACTICAL)

Maximum Marks: 100
Paper- 80
Internal Assessment- 20

Credit hours: 4 /week
Duration of Exam: 4 hours

Instructions to the Examiners:
1. Examiner is required to set one question covering the designing, style reading, pattern development and construction of any one garment.
2. Paper will be of four hour duration.

Objectives:
To impart knowledge about-
1. Style reading
2. Pattern Development and material layout
3. Various construction details.

1. Designing and style reading of the following:
   - Trousers
   - Jacket
   - One piece dress

2. Pattern Development, material layout and Construction of the above garments (one each)

Recommended Readings:

2. Metric Pattern cutting by Winifred Aldrich-New Delhi Om Service
3. Complete guide to sewing by Reader’s Digest
5. Sewing in colour by Mc Calls-London, Hamlyn, 1972

QUALITY CONTROL IN APPAREL AND TEXTILES (THEORY)

Maximum Marks: 50
Paper: 45
Internal Assessment: 05

Credit Hours: 2/ week
Duration of Exam: 3 hours

Instructions to the Examiner:
Question paper will have four sections. Examiner will set a total of nine questions comprising of two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions should carry equal marks.
Objectives:
To impart knowledge about
1. Various standard organization
2. Various legislations regarding fiber identification
3. Role of textile testing in quality control

UNIT-I
1. Introduction to Quality Control:
   a. Definition of quality, importance of quality assurance
   b. Concept of Total Quality Management (TQM)
   c. Tools of Quality Control
2. Legislation in Textiles Acts:
   a. Textile Fiber Product Identification Act
   b. Wool product Labelling Act
   c. Fur product Labelling Act
   d. Flammable fabrics Act

UNIT-II
3. Standardization in textiles: concept, benefits and levels of standards
4. Stages of quality control (Design to Despatch)
5. Garment finishing and Inspection:

UNIT-III
6. Role of various standard institutions and organizations in Quality control
   ASTM, AATCC, ANSI, BSI, BIS.ISO and its series
7. Research Associations and their role
   SITRA, BTRA, NITRA, ATIRA, MANTRA, IJRA, SASMIRA, WIRA

UNIT-IV
8. Parameters for apparel quality testing and control: Stitch quality, stitch length, quality of threads, button strength, accessories and embellishments.
10. Packaging: Importance, types and various materials used for Packaging

Recommended readings:
5. Ruth EC, “Apparel manufacturing and Sewn product analysis”,

COMPUTER APPLICATIONS IN CLOTHING AND TEXTILES (PRACTICAL)

Maximum Marks: 50
Paper: 40
Internal Assessment: 10

Credit Hours: 2/ week
Duration of Exam: 4 hours

Instructions to the Examiner:
1. The examiner is required to set 3 questions, internal choice may be given.
2. The paper should be balanced and cover the entire syllabus.

Objectives:
To impart knowledge about
1. Adobe Photoshop
2. Corel Draw
3. Rich Peace

UNIT- I

1. ADOBE PHOTOSHOP
   a) Study in detail different tools of Photoshop.
   b) Create composition of stripes, checks in various textures and colours.
   c) Pick up a costume worn by a famous fashion model. Scan her figure and redesign the texture and colour combination of the dress.
   d) Design a mood board according to the selected theme.
e) Create Logos, Pamphlets and Visiting Cards.

UNIT-II

2. COREL DRAW/ ADOBE ILLUSTRATOR

a) Study in detail different tools of the software.
b) Create a composition of geometrical shapes, traditional and contemporary motifs.
c) Line development of the following
   • Bed linen
   • Table linen
   • Curtains and Towels

UNIT-III

3. RICH PEACE

a) Study in detail different tools of the software.
b) Drape the fashion figures in different silhouettes.
c) Create a the metic design collection.

Recommended Readings:
1. Internet for Everyone by Alexis Leon and Mathews Leon
2. Corel Draw by BPB Publication
3. Modules of the softwares.

ENTREPRENEURSHIP (THEORY)

Maximum Marks: 50
Paper - 40
Internal Assessment - 10

Credit Hours: 2 /week
Duration of Exam: 3 hours

Instruction to the Examiner:
1. Each theory paper will be of three hours duration.
2. Questions paper will have four units.
3. A total of Nine questions comprising of two questions from each unit and one compulsory question of short answer type covering the whole syllabus will be set.
4. All questions may carry equal marks unless specified.
5. Students will be expected to attempt one question from each unit and the compulsory question
Objectives:
1. To acquaint the students with various entrepreneurial skills
2. To make the students aware about creation and management of enterprise.

UNIT- I

1. Entrepreneurship as a process
   Role of entrepreneurship
   Entrepreneurship and economic development

2. Entrepreneurship in Textile industry
   Entrepreneurial skills and traits
   Case study of boutique owner

UNIT-II

3. Small Enterprises and Startups
   Rationale and objectives
   Problems of Small enterprises and Startups in India.

4. Small business enterprises in relation to Fashion Industry
   Procedure and formalities in their setup.

UNIT-III

5. Project; Meaning and classification
   Project Identification and classification
   Budgeting and Funding

6. Project Formulation
   Feasibility analysis
   Techno-Economic Analysis
   Financial Analysis and Cost-Benefit Analysis

UNIT-IV

7. Project Finance
   Long term vs short term finance
   Angel investors

8. Women enterprises in clothing and textiles in India
   Women entrepreneurs; challenges faced
   Institutions assisting women entrepreneurs in India
Recommended Readings:
1. Gupta, C, B (2004). Entrepreneurship Development in India Sultan Chand, New Delhi,

SEMESTER III

COURSE NO : 114-PRODUCT DEVELOPMENT (Pr)

Teaching Period: 2 Hrs/week.

Objectives:

To be able to
• understand target customer, market trends and forecast.
• identify the product to be developed.
• understand the process of design development.
• learn the process of product development and the presentation.

Contents

• To develop a product by taking an industry oriented or final consumer oriented problem by the following steps:
  • Research
    - Target Customer
    - Market trends
    - Forecast
  • Design Development
    - Theme selection
    - Design process- inspiration, mood board, and story board.
- Sourcing
- Product Development
- Photoshoot of product with appropriate background and props.
- Showcasing/Presentation

Note: No question paper shall be set. Showcasing/Presentation of the final product will be evaluated by an external examiner.

COURSE NO:- 115-TEXTILE CHEMISTRY (Th.)

Teaching Period: 3 Hrs/week

Objectives:

To understand

- the chemistry of textile fibers.
- softening of water.
- bleaching of textiles.
- theory of dyeing.
- textile Finishes.

Instructions to Paper Setters

Question paper will have four sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. a. Polymerisation addition & condensation.
   b. Significance of molecular structure - crystalline & amorphous.
   c. Physical properties of textile fibres.

2. Chemistry of natural fibers - cotton, silk, wool:
   a. Chemical composition.
   b. Structure and groups.
   c. Chemical properties.

3. i Chemistry of man - made fibers:
a. Regenerated: Rayon, acetate, rayon, triacetate.
b. Chemical composition.
c. Manufacture and properties.

ii. Synthetics: -
   a. Polyesters - terylene.
   b. Polyamide - 6 & 66
   c. Modacrylic - Dynel
   d. Olefine - Polyethylene and polyprolene.

iii. Chemical composition, manufactures, and properties.

UNIT-II

4. Water types and impurities and methods of softening:
   i. Lime soda process
   ii. Base exchange
   iii. Demineralization

5. Chemistry of soaps and detergents.

6. Bleaching:
   i. Types of bleaches
   ii. Bleaching of cotton, wool and silk.
       Optical whitening.

UNIT-III

7. Dyes:
   i. Theories of dyeing; Classification.
   ii. Application of Direct, Acid, Basic and Azoic dyes on Cotton, wool and silk.

UNIT-IV

8. Finishes:
   i. Chemical finishes: Basic (mercerization) and acid (organdy).
   ii. Resin:
       a. Moth proofing
       b. Bacteriostatic
       c. Antistatic
       d. Water repellent
       e. Water proofing
f. Absorbent 
g. Fire retardant 
h. Fire proofing 


References:

COURSE NO: - 116-TEXTILE CHEMISTRY (Pr)

Teaching Period: 2 Hrs/week

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Instructions to Paper Setters.
1. Each practical paper will be of four hours duration.
2. The question paper should be balanced.

PART-A

1. Scouring and bleaching of cotton.
3. Dyeing of cotton with azoic, reactive and acid dyes.
4. Dyeing of silk with direct basic and reactive dyes.
5. Dyeing of wool with acid, basic dyes.
6. Dyeing of nylon with acid dye.
7. Dyeing of cotton, silk and wool with mineral dyes.
8. Extraction and application of any one natural dye using natural source on cotton.

PART-B

REVIEW

1. Fiber identification.
2. Qualitative and quantitative analysis of blends/mixture.

References:
1. Williams, B.J. Practical Textile Chemistry.
2. Trotman, E.R. Bleaching, Dyeing and Chemical Technology of Fiber.

NOTE: Part- B will not be included for the examination.

COURSE NO:- 117- SCIENTIFIC WRITING (Pr.)

Teaching Periods: 2 Hrs/week

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Note:
- The external examiner will conduct the viva voce.
- Practical will be based on continuous internal assessment.

Instructions to Paper Setters

Note:
- Each practical paper will be of three hours duration.
- The question paper should cover the entire syllabus.

Objectives:
- To be able to appreciate and understand the importance of writing scientifically.
- To develop competence in writing and abstracting skills.

Contents
1. Scientific writing as means of communication
   Different forms of scientific writing (articles in journals, research notes and reports review articles, monographs, dissertations, bibliographies, book chapters, and articles in other publications).

2. How to formulate outlines
   The reason for preparing outlines as a guide for plan of writing and as a skeleton for the manuscript.
   Kinds of outlines (topic outlines, conceptual outline, sentence outline, combination of topic and sentence outline).

3. Drafting titles, subtitles, tables, and illustrations.
Tables as systematic means of presenting data in rows and columns and lucid ways of indicating relationships and results.
Formatting tables.
Appendices: Use and guidelines.

4. The writing process
   Getting started.
   Using outline as a starting device. Drafting.
   Reflecting, rereading (checking organization, checking headings, checking content, checking clarity, checking grammar).
   Brevity and precision in writing.
   Drafting and re-drafting based on critical evaluation.

5. Parts of dissertation/research report/article
   Introduction
   Review of literature
   Methods
   Results and discussion
   Summary and abstract
   References

6. Writing for grants
   The question to be addressed
   Rationale and importance of the question being addressed
   Empirical and theoretical framework
   Presenting pilot study/data or background information
   Research proposal and time frame
   Specificity of methodology
   Organization of different phases of study
   Expected outcome of study and its implications
   Budgeting
   Available infra-structure and resources
   Executive summary

References:

Continuous Internal Assessment is based as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Marks</th>
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<tr>
<td>Terminal exam.</td>
<td>5</td>
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<td>File</td>
<td>3</td>
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<tr>
<td>Attendance</td>
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<td><strong>Total</strong></td>
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I. Weightage of 2 marks for attendance component out of 15 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break-up of marks for attendance component for theory paper shall be as under:

<table>
<thead>
<tr>
<th>Attendance Component</th>
<th>Marks for the theory paper</th>
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<td>a) 75% and above upto 85%</td>
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<tr>
<td>b) Above 85%</td>
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II. Continuous Internal Assessment Awards must be sent to the Controller of Examinations, by name, two weeks before the commencement of the particular examination on the performa obtainable from the examination branch.

COURSE NO:- 118-TEXTILE DESIGNING (Th.)

Teaching periods : 02Hrs/week.

Objectives:

To impart knowledge about:
- Different types of looms and their working.
- Different types of weaves.
- Knitting and its analysis.

Instructions to Paper Setters

Question paper will have four sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Kinds of looms
2. Working of various shuttle and shuttleless looms with their parts.
UNIT-II


4. Drafts and lifting plans constructions:
   Development of weaves from elementary bases.
   a) Plain weave derivatives
   b) Weaves constructed on twill bases.
   c) Satin or sateen bases.

UNIT-III

5. Simple colour and weave effects.

   b) Drafting for Dobby

UNIT-IV

7. a) Working of a Jacquard loom
   b) Harness mounting
   c) Cross border Jacquards.
   d) Drafting for the Jacquards.

8. Classification of Knitting.

9. Control of design elements
   a. Yarn calculation for warp and weft knits.
   b. Analysis and testing of knitted samples.

COURSE NO:- 119-TEXTILE DESIGNING (Pr.)

Teaching periods- 3Hrs/week

Total Marks : 75
Paper : 60
Int. Ass. : 15

Instructions to Paper Setters

• The paper should be of four hours.
• The question paper should be balanced.
UNIT- I

1. Weaving
   a. Setting up of a simple loom.
   b. Making of samples of different weaves (plains, rib, twill structure)
   c. Identification of weaves and their graphical representation.

UNIT- II

2. Making of sample of other constructional techniques like Madame, Tatting, crocheting.

UNIT-III

3. Knitting
   a. Setting the machine for basic knitting (Flat Knit).
   b. Control of design elements.
   c. Yarn calculations for weft and warp knits.
   d. Preparation of knitting samples:- Single jersey, rib, purl, interlock, float and tuck stitches.
   e. Analysis and testing of knitted samples.

UNIT- IV

4. Techniques of Designing:
   a. Transfer printing technique.
   b. Batik Printing
   c. Developing innovative techniques in hand painting (colour blending)

5. Developing a product using any of the above techniques.
6. Visit to a textile designing and Printing units.

References :

1. Spencer, D.J. Knitting Technology.
2. Ambary, T.B. Knitted Clothing.
4. Raz, S. Flat Knitting.
6. Murphy, W.S. Textile Weaving and Design.
7. Murphy, W.S. Handbook of Weaving.


**Course No: 120 : DISSERTATION**

**Teaching periods:** 2 Hrs/week  
**Paper :** 100

**Objective :**

To understand an independent piece of research work in a relevant area of Clothing and Textiles.

**Note :**

1. The research work should contribute to the advancement of knowledge in the field. The students must be guided and supervised by a member of the teaching faculty of the department. Each student must submit a written dissertation at the end of the 4th semester of M.Sc. Dissertation should include introduction, methodology, results, discussion, summary, conclusions, and references.

2. Marks will be awarded at the end of the 4th semester, after the submission and evaluation of the dissertation through a viva voce examination for assessment. The external and internal examiners will jointly evaluate the dissertation.

**COURSE NO :-121-DRAPING (Pr.)**

**Teaching periods :** 2 Hrs/week

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**Instructions to Paper Setters**

- The paper should be of four hours.
- The question paper should be balanced.

**UNIT-I**

1. Draping of basic bodice block- Front and Back.
2. Draping of basic skirt block- Front and Back

**UNIT-II**

3. Draping and style reading of top Bodices- Princess line and Cowl.

**UNIT-III**

References:

SEMESTER IV

Course No: 120 : DISSERTATION (IN CONTINUATION FROM SEMESTER III)

Teaching periods: 2 Hrs/week

Objective:
To understand an independent piece of research works in a relevant area of Clothing and Textiles.

Note:

1. The research work should contribute to the advancement of knowledge in the field. The students must be guided and supervised by a member of the teaching faculty of the department. Each student must submit a written dissertation at the end of the 4th semester of M.Sc. Dissertation should include introduction, methodology, results, discussion, summary, conclusions, and references.

2. Marks will be awarded at the end of the 4th semester, after the submission and evaluation of the dissertation through a viva voce examination for assessment. The external and internal examiners will jointly evaluate the dissertation.

COURSE NO:- 122-CAD II (Pr.)

Teaching periods: 4 Hrs/week

Instructions to Paper Setters
The paper should be of four hours.
The question paper should be balanced.

1. TUKA CAD.
   a. Study in detail the different tools of Tuka Tech.
   b. Shifting of darts to different positions, making them into straight, square, curved and asymmetric darts.
   c. Making various shaped necklines and collars Peterpan, Baby, sailor and Mandarin.
   d. Creating pattern for different kinds of sleeves - Plain, Puff, Cap, Bell, Umbrella, Leg-O-mutton, Bishop, Magyar & Raglan.
e. Sloper development for bodice block with basic Sleeve Block, Trouser, Skirts & One piece dress.

f. Grade Basic bodice, sleeve & skirt to 5 different sizes.

g. Basic principles of marker making on computer (cutting and layout).

II TUKA STUDIO

1. Study in detail the different tools of Tuka Studio:
   a. Designing of household linens using Tuka studio commands.
   b. Create different repeats, colour ways, textures of the above designs.

References:


COURSE NO:- 123-PORTFOLIO MAKING

M. Marks : 75
(Internal only)

Teaching periods: 3Hrs/week

- Purpose and Scope of a Portfolio:
  - What is a Portfolio;
  - Types of Portfolio
  - Purpose: Portfolio for client
  - Portfolio for a prospective job interview

- Portfolio making by using appropriate techniques.
- To make a digital version of portfolio (C.D.)

Note:

- No question paper shall be set.
- The marks will be awarded at the end of the semester.
- The marks will be awarded by the Internal Examiner only
COURSE NO:-124-FASHION MERCHANDISING (Th.)

Teaching periods : 3 Hrs/week

Objectives :

To understand :

• Fashion merchandising.
• Fashion marketing.
• Fashion retailing.
• Visual merchandising.

Instructions to Paper Setters

Question paper will have four sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

I Terms & Terminology

• Merchandize, Branded Merchandize, Colour Palette, Colour way, Cost price, Costumer Profile, Fabric sourcing, Garment sourcing, Grades, Mark-ups, Margin, Quality control, Range Planning, Spec sheet, Proto type.

II Fashion Merchandising

- Step in Fashion Merchandising:
  • Planning
  • Buying/ Procuring
  • Promoting/selling
- Requirements of Fashion Merchandiser.

UNIT-II

III Marketing of Fashion

- Marketing Concept
- Market Segmentation
- Channels of distribution
- Timmings of product development & Showings
IV  Fashion Retail

- History & Development of Fashion Retailing
- Retail Stores
  • Specialty Stores.
  • Discount Stores
  • Leased department Store
  • Factory Outlets
  • General Stores
  • Departmental Stores
  • Chain Stores
  • Mail Order Houses

- Trends in Fashion Retailing

UNIT-III

V  Visual Merchandising

- Store planning & Design
- Types of display
  • Window Display
  • Interior Display

- Elements of Visual Merchandising
  • The Merchandise
  • Mannequins & Forms
  • Props
  • Fixtures
  • Lighting
  • Signage
UNIT-IV

VI Fashion Promotion
- Fashion Advertising
- Personnel Selling
- Publicity
- Fashion Stores

VII A case study of any brand/store.

References:

1. Goworek “Helen Fashion Buying”.
2. Stone, E. “Fashion Buying & Merchandising”.