

## 2.1 COMMUNICATION SKILLS - II

L T P  
3 - 2

### RATIONALE

Language is the most commonly used and effective medium of self-expression in all spheres of human life – personal, social and professional. A student must have a fair knowledge of English language and be able to pursue the present course of study and handle the future jobs in industry. The objective of this course is to assist the diploma holders to acquire proficiency, both in spoken (oral) and written language. At the end of the course, the student will be able to develop comprehension, improve vocabulary, develop grammatical ability, enhance writing skills, correspond with others, enhance skills in spoken English.

### DETAILED CONTENTS

1. Prose Text Book (12 hrs)

The following six chapters of A Book of English for Polytechnics – Prose Selection, Published by MacMillan India Ltd., on behalf of Technical Teachers' Training Institute, Chandigarh

- a) Uncle Podger Hangs a Picture
- b) Subash Chandra Bose
- c) A Pair of Mustachios
- d) Guru Gobind Singh
- e) With The Photographer
- f) Sir Jagdish Chandra Bose

There will be one general question from one of these six chapters.

2. Precise writing (selected from the prescribed 6 chapters of Prose Text Book) (4 hrs)
3. Grammar (2 hrs)  
Antonyms change of words into different parts of speech
4. Correspondence (10 hrs)
- a) Business letters such as:
    - Registration as supplier
    - Floating quotations and tenders
    - Quarry for product specification, price and other details etc from a firm/Company
    - Covering letter for quoting prices against a quotation/tender
    - Placing supply order

- b) Personal letters such as:
- Application for leave and extension of leave
  - Application for seeking a job/employment
  - Conveying congratulation messages to a relative/friend/colleague on different occasions
  - Conveying condolence message to a relative/friend/colleague
  - Request letter to guardian for sending money for excursion/study tour
  - Letter to your brother/sister/friend describing your first day experience in the polytechnic
- c) Official letters such as:
- Letter to editor for placing an advertisement in the newspaper for purchase/selling of goods
  - Letter to Municipal Commissioner for improving water supply/sanitation system in your locality
  - Letter to General Manager, Telephone Department for restoring a dead telephone/shifting a telephone
  - Letter to State Electricity Board for repair of street lighting/correction of bills etc.
  - Letter to the supplier for rectifying or replacing a defective machinery/item of purchase
  - Letter to Registrar, State Board of Technical Education for allowing to improve grades/marks in diploma examination
5. Report Writing (2 hrs)
- Drafting a technical report of a visit to a factory, construction site, modern office, etc.
  - Report writing on current general themes/topics related to economy, industry, social issues
  - Elements of periodical progress report
6. Inspection Note (2 hrs)
- Write an inspection note after inspecting technical/industrial goods
  - Write an inspection note after visiting a construction site or production shop
7. Writing “Preface” and “acknowledgement” of a project report (2 hrs)
8. A paragraph on current topics/themes (2 hrs)
- Technology
  - Science

- Economy
  - Politics
  - Social
  - General
9. Vocabulary (2 hrs)
- words, idioms, phrases, antonyms and synonyms
  - Translation of 100 most popular administrative terms from English to Hindi and from Hindi to English
10. Drafting (4 hrs)
- Press notes
  - Memos/circulars
  - Notices (lost and found: obituary/auction, etc)
  - Telegrams
  - Press releases
  - Agenda and minutes of the meeting
  - Personal resume/curriculum vitae
11. Communication Techniques (6 hrs)
- Importance of communication
  - Types of communication – verbal and non-verbal
  - One way and two way communication
  - Process of communication – horizontal, vertical, upward, downward
  - Essentials of good communication
  - Level of communication – inter and intra personal, group to person, group to group
  - Methods of effective oral, written and non-verbal communication, Horizons – tone, frequency, rate, volume, depth
  - Barrier to communication and over coming barriers
  - Listening skill
  - Use of audio visual aids for effective communication

### **LIST OF PRACTICALS**

1. Presentation of Technical Report, using Audio-visual aids
2. Preparation and Presentation on a Seminar of a given topic/theme using power-point
3. Telephonic conversation – Conveying and Receiving
4. Mock Exercises for an interview for a job/employment
5. Listening comprehension from a radio/cassette talk in English

6. Extempore speech
7. Oral presentation with stress on proper body language, voice modulation

**Note:** For reading comprehension, listening comprehension and effective speaking skills, English Language Laboratory Manual and Workbook published by State Board of Technical Education, Hyderabad (AP) may be used along with text book

### **RECOMMENDED BOOKS**

1. Essentials of Business Communication by Pal and Rorualling; Sultan Chand and Sons
2. The Essence of Effective Communication, Ludlow and Panthon; Prentice Hall of India
3. New Design English Grammar, Reading and Writing Skills by AL Kohli (Course A and course B), Kohli Publishers, 34 Industrial Area Phase-II, Chandigarh,
4. New Design English Reading and Advanced Writing Skills for Class XI and XII by MK Kohli and AL Kohli; Kohli Publishers, 34 Industrial Area Phase-II, Chandigarh,
5. A Practical English Grammar by Thomson and Marlinet
6. Spoken English by V Sasikumar and PV Dhamija; Tata McGraw Hill
7. English Conversation Practice by Grount Taylor; Tata McGraw Hill
8. Developing Communication Skills by Krishna Mohan and Meera Banerji; MacMillan India Ltd., Delhi
9. Business Correspondence and Report Writing by RC Sharma and Krishna Mohan; Tata McGraw Hill Publishing Company Ltd. New Delhi
10. Communication Skills by Ms. R Datta Roy and KK Dhir, Vishal Publication, Jalandhar

## 2.2 DRAWING AND RENDERING - II

L T P

- - 4

### RATIONALE

Diploma holders of textile design are required to draw various forms of objects from their surroundings and nature from design point of view e.g flowers, leaves, fruits, plants, monuments etc. The translation of ideas into practice without the use of this graphic language is really beyond imagination. The students are supposed to go for outdoor sketching, also to the museums, gardens and monuments so that they can use various shapes, colours and textures in their designs.

### DETAILED CONTENTS

Related theory for Practical Exercises	Practical Exercises
1. Understanding of different shapes of objects, opaque and transparent objects, glazed and rough surface; objects and use of different mediums	1.1 Draw different shaped objects like round (pot, kettle, ball etc), square (match box, duster, big and small boxes) and make them by black pen and ink
2. Study of Drapery	2.1 Different folds of drapery may be studied with any back ground by black pen and ink
3. Stylizing the different objects	3.1 Stylization of the objects studied in theory and then forming a composition

- Note: 1. Students should be taken out for field visits, museums, exhibitions, market, etc for clarifying the concepts and principles of this course as per requirement.
2. There will be only a practical paper in this subject. The knowledge attained by students regarding related theory for practical exercises will be evaluated in the form of viva-voce during practical examinations.

### RECOMMENDED BOOKS

1. How to draw and paint by A Walter foster; published by E.D. Galgotia and sons.
2. Flowers and still life by A Walter foster; published by E.D. Galgotia and sons.
3. How to draw and paint textures of animals by A Walter foster; published by E.D. Galgotia and sons.

## 2.3 BASIC DESIGN - II

L T P

- - 4

### RATIONALE

Diploma holder of Textile Design are supposed to know the concepts of construction of designs in various styles by using various techniques according to the suitability of various kinds of fabrics on paper with colours. Students are given understanding of all elements and concepts of design through various exercises. They are also taught use of different tools and art-materials

### DETAILED CONTENTS

Related theory for Practical Exercises	Practical Exercises
1. Understanding of collage work and its use in making designs	1.1 Students will make various motifs with coloured papers/glazed papers or pictures on given suggested themes: a) Composition of flowers b) Composition of animals c) Composition of birds d) Composition of flowers and birds
2. Understanding of various styles of designs: - Natural (Realistic) - Conventional - Geometrical - Geometrical - Abstract - Traditional - Folk - Symbolic	2.1 Students will make motifs based on each style  2.2 Style on any theme by using postal colours as a basic medium  2.3 With the reference of above motifs samples of following arrangement on quarter size drawing sheet will be prepared by students 1) All over arrangement 2) Border arrangement 3) Centre arrangement 4) Corner arrangement 5)
3. Change of one style of design to another	3.1 Students will practice to change designs from one style to another

Related theory for Practical Exercises	Practical Exercises
4. Construction and placement of designs on various basis <ul style="list-style-type: none"> <li>- Drop designs (Unit repeating designs)</li> <li>- Half drop designs</li> <li>- Drop reverse designs</li> <li>- Sateen based arranged designs (regular and irregular sateen arrangements)</li> </ul>	4.1 Students will practice to make designs on various basis for various types of arrangements  4.2 Students will make 2 – 4 samples of designs on quarter sized drawing sheet on various arrangements with poster colours as a medium
5. Stripe and check designs	5.1 Students will make motifs of stripe and check designs suitable for printed and woven fabrics by using poster colours/sketch pens (inks) as medium
6. Enlargement and Reduction of Design	6.1 Students will draw motifs of various designs in enlarged and reduced sizes

Note: Students should be taken for field visits, museums, exhibitions, market, etc for clarifying the concepts and principles of this course as per requirement. There will be only practical paper in this subject. The knowledge attained by students regarding related theory for practical exercises will be evaluated in the form of viva-voce during practical examinations

### RECOMMENDED BOOKS

1. The Encyclopaedia of Patterns and Motifs by Dorothy Bosomworth; Studio London
2. Designer's Guide to Colour 3 by Jeanne Alen; Chronicle Books, San Francisco
3. Fabric Painting by Jill Kennedy and Jane Varsall; BT Batsford Ltd., London
4. Designer's Guide to Japanese Patterns by Jeanne Allen; Chronicle Books, San Francisco
5. Handwoven Fabrics of India by Jasleen Dhamija and Jyotindra Jain; Mapin Publishing Pvt. Ltd., Ahmedabad

6. Impression - A Classic Collection of Textile Design by K Prakash; The Design Point, B-7, Shiv Krupa Apartments, Old Nagaradas Road, Andheri (E) Bombay 400 069 (India)
7. Textile Designs- Idea and Applications by Joel Sokoelov; PBC International, Inc., New York
8. History of Textile Design by VA Shenai; Sevak Publications, Bombay 400 031
9. Fabric Art Heritage of India by Sukla Dass; Abhinav Publications
10. Fabric Painting Made Easy by Nancy Ward; Craft Kaleidoscope, Chilton Book Company, Radnor, Pennsylvania
11. Watson's Textile Design and Colour by Z Grosicki; Universal Publishing Corporation, Bombay (India)
12. Textile Designs- 200 years of Patterns for Printed Fabrics Arranged by Motifs, Colours, Period and Design by Susan Maller and Joost Elffers; Thames and Hudson
13. English and American Textiles from 1790 to the Present by Mary Schoeser and Celia Rufey; Thames and Hudson

## 2.4 COLOUR AND TEXTURE - II

L	T	P
-	-	4

### RATIONALE

Diploma holders of Textile Design should know the basics of colour theory, to enhance the beauty of design. Colour plays a vital role in design. With various mediums like coloured inks, crayon, water colours and poster colours etc, they are taught to create colour mixing, colour combinations and texture, creating various tonal effects

### DETAILED CONTENTS

#### PRACTICAL EXERCISES

1. Colour Terminology (Colour Measurements): Express the following words in colour with illustration and notes:
  - a) Hue
  - b) Value
  - c) Intensity
  
2. Colour Schemes:
  - a) Contrast Colour Scheme: Introduction to various colour harmonies
  - b) Achromatic Colour Scheme: Arrange different geometrical shapes in 12x12” and paint it with achromatic colour
  - c) Prepare Monochromatic and Polychromatic colour scheme
  - d) Analogous colour scheme: Transparent and opaque colours; positive and negative
  - e) Complementary Colour Scheme: Make designs showing different sets of complementary colours
  - f) Split Complementary: Double split complementary
  - g) Warm and cool colour
  - h) High key, middle key and low key
  
3. Texture: Texture file with 25 different textures: Use of texture on cloth:
  - a) Marble

- b) Spray
  - c) Rubber
  - d) Vegetable
  - e) Brushes
  - f) Coin
  - g) Smoke texture
4. Make a colour chart showing as many as colours you can at different values and intensity
5. Instrumental colour measurement (may be demonstrated in institution/industry)

**Note:** Mixing and developing of different colour shades may be shown on computer so that the students are able to appreciate the importance of the subject

### **RECOMMENDED BOOKS**

1. Computer Colour-10,000 computer - Generated Process colours by Michael and Pat Rogondino; Angus and Robertson Publishers (Practical reference of colours Processed by Mixing)
2. Colour in Theory and Practice by HD Murray; Chapman and Hall Ltd., 37 Essex Street, WC 2, London 1952
3. An Introduction to Colour by Ralph M Evans; London Chapman and Hall Ltd.
4. Designer's Guide to Colour 1, 2, 3, 4, 5, 6 by Ikuyashi Shibukawa and Yum Takahashi; Chronicle Books, San Francisco
5. Colour Harmony- A guide to Creative Colour Combinations by Hideaki Chijiiwa, Professor Musashino College of Art; India Book Distributors
6. Variety Fashion for Freedom by SA Huisain; Trends Today, Bombay, India
7. The 4 - Colour Person by Dr Max Luscher; Simon and Schuster
8. The Colour Handbook how to Use Colour in Commerce and Industry by EP Danger; Gower Publishing Company, Old Post Road, Brookfield Vermont 05036, USA

## 2.5 INTRODUCTION TO TEXTILE PROCESSES - II

L T P  
3 - 4

### RATIONALE

The students of textile design are supposed to have introductory knowledge and skill related to various fibres, yarns and fabrics. Thus in this subject students learn different fibres, yarns and fabrics and their manufacturing techniques.

### DETAILED CONTENTS

<b>Theory</b>	<b>Practical Exercises</b>
1. Introduction to mixing and blending techniques (3 hrs)	
2. Principles of blow room, carding, drawing/gilling, speed frame, ring frame and doubling (7 hrs)	2.1 Understanding different spinning processes by textile mill visit
3. Process flow of cotton, woolen, and worsted system of yarn manufacture (4 hrs)	3.1 Estimation of fibre diameter and yarn diameter by projection microscope 3.2 Understanding different processes by textile mill visit
4. Insertion of twist, S and Z twist, type of package in spinning and doubling (5 hrs)	4.1 Inspection of yarns for S and Z twist, hard twisted and soft twisted yarns
5. Knowledge of standard yarns, bulked yarn, core yarn, high tenacity yarn, lustre yarn, tyre cord yarn, carpet yarn, stretch yarn, twist-of-twist yarn, spiral yarn, grandrella yarn, hosiery yarn (8 hrs)	5.1 Identification of different types of yarns studied in theory
6. Introduction to yarn packages (2 hrs)	
7. Process flow of fabric manufacturing (7 hrs)	7.1 Understanding different processes of weaving through textile mill visit
8. Basic principles of weft and warp knitting and use of knitted fabrics (6 hrs)	8.1 Understanding process of knitting through textile mill visit

Theory	Practical Exercises
9. Process flow of wet processing ( 6 hrs)	13.1 Understanding of dyeing and printing through textile mill visit

**Note: The student may be exposed to different types of textile manufacturing processes through textile mill visit so that they are able to understand the subject properly.**

### **RECOMMENDED BOOKS**

1. Textile Fibre by Ghol and Valanslk
2. Yarn to Fabric by Peter Schwarz
3. Fibre to Fabric by BP Corbman
4. Textile Fibres and their processings by KP Hess
5. Elementary Textile By Parul Bhatnagar; Abhishek Publisher, Chandigarh

## 2.6 STRUCTURAL FABRIC DESIGN - II

L	T	P
3	-	4

### RATIONALE

The students of textile design are supposed to have knowledge and skill regarding various weaves and their construction. Hence, in this subject, students will learn different weaves, their method of employment to acquire competency for production of woven designs for different end uses.

### DETAILED CONTENTS

#### THEORY

1. Characteristics and uses of satin and sateen weaves, construction of regular and irregular satin and sateen (6 hrs)
2. Construction of bed ford cord and wadded bed ford (4 hrs)
3. Backed fabrics, warp and weft backed fabrics, wadded warp and weft backed fabrics their beaming and drafting procedure (6 hrs)
4. Welts and piques, methods of embellishing pique fabrics their structure, plain pique backed pique, fast backed welts and waved pique (Mill visit) (8 hrs)
5. Diamond weaves and their construction (4 hrs)
6. Simple honey comb, brighton honey comb, hucbaback, sponge and similar weaves (5 hrs)
7. Mock leno weave and distorted thread effects (4 hrs)
8. Extra warp and weft, principles of figuring with extra warp and weft one and one i.e. pick and pick wefting, two and two wefting, methods of disposing of extra threads on the back of the fabric. Spot figures with extra warp and extra weft arranged in a particular order (10 hrs)

#### PRACTICAL EXERCISES

Following weaves to be constructed on Graph Paper

1. Construction of pointed and diagonal weave, satin and sateen weaves – regular and irregular
2. Construction of Honey comb weave and brighton honey comb

3. Construction of Hucka back weave
4. Construction of Mock leno weave as on following samples

Tray Cover - Tea cozy

Table Mat

Theme: Motif design with binding weave

Warp count 2/24 s

Weft Yarn Wool fancy or any other suitable material

Cushions

Weave in combination with plain weave

Placement square on rectangle blocks

warp count 2/10 s or 2/20s

Weft yarn Fancy material

5. Drafting and denting of warp for weaves studied in theory
6. Study of effect of structure of cloth by changing denting plan
7. Study of effect of change in structure by varying lifting plan

Note: Concept of different weaves should be made clear with the help of samples and bobbin samples so that the students are able to identify different weaves in the fabric samples

**RECOMMENDED BOOKS**

1. Grammer of Textile Design – Nisbet
2. Structural Fabric Design by – Kilby
3. Woven Structures and Design – Doris Goerner; British Textile Technology Group WIRA House, Leeds (UK)
4. Fibre to Fabric by Ghosh
5. Watson's Advance Textile Design
6. Watson's Textile Design and Colour

## 2.7 ART APPRECIATION IN INDIAN TRADITIONAL TEXTILE DESIGN - II

L T P  
3 - 2

### RATIONALE

Diploma holders of textile design are supposed to know the historical backgrounds of Indian traditional textiles i.e. woven, printed and embroidered and their development of design, fabric uses and technical details. In practical, students learn to prepare replicas, for which they should visit art galleries and museums

### DETAILED CONTENTS

Theory	Practical Exercises
1. Study of printed and painted textiles with reference to: <ul style="list-style-type: none"> <li>- Historical significance</li> <li>- Printing Techniques</li> <li>- Styles, colour and dyes and motifs</li> <li>- Centres of production</li> </ul> a) Kalamkari b) Gujrat and Rajasthan (Block Printing) c) Madhubani d) Indian Miniatures e) Saree of India <div style="text-align: right;">(22 hrs)</div>	1.1 Replication of designs (2 to 4 designs each)  1.2 Assignments to students on designs  1.3 Presentation of assignments  1.4 To practically make a wall panel with one or two styles
2. Study of resist dyed textiles with reference to : <ul style="list-style-type: none"> <li>- Historical signicance</li> <li>- Dyeing techniques</li> <li>- Styles, colour and Motifs</li> <li>- Centres of Production</li> </ul> a) Patola, Ikat and Pochampalli b) Bandhani of Rajasthan and Gujrat c) Saree <div style="text-align: right;">(20 hrs)</div>	2.1 Replication of designs (2 to 4 designs each)  2.2 Assignments to students on designs  2.3 Presentation of assignments
3. Study of carpets and floor coverings <div style="text-align: right;">(6 hrs)</div>	3.1 Replication of designs (2 to 4 designs each) 3.2 Assignment to students on design 3.3 Presentation of assignments

Note: Students should be taken for field visits to various production centres to show the samples of the above mentioned textiles (embroidered, woven, printed and dyed) They may also be taken for field visits to various places like art galleries/museums/religious places

Practically execute any one of the traditional designs in the contemporary form and prepare a file with replica or samples of the given topics

### **RECOMMENDED BOOKS**

1. Folk Embroidery of Himachal Pradesh by Subhashini Aryan
2. Ikat Textile of India by Chetna Desai
3. Indian Painted Textiles by Kamla Dev Chattopadya
4. Carpets of India by Marq
5. Fabric Art heritage of India by Sukla Das
6. Hand Woven Fabric of India by Jasleen Dhamija
7. Indian Sari by Kamla Dev Chattapodya
8. Tie Dyed Textile of India by Veronica Murphy
9. Hand Woven Fabrics of India by Jasleen Dhamija
10. Traditional Indian Textiles by John Gillow
11. Textile Art of India by Kyoto Shoin
12. Hand Painting Textile For the Home by Kaszz Ball and Valcrie
13. Tie Dyed Textiles of India by Murphyd Crill
14. Masterpieces of Indian Textile by Rustam J Mehta
15. Kashmir Shawls by All India Handicrafts Board
16. Everything you ever wanted to know about Fabric Painting by Jill Kennedy and Jane Vourell
17. Saries of India – RTZ and Singh
18. Saries of Madhya Pradesh

19. Embroidered Textiles of India Calico Masam of India
20. Painted Textiles of India Calico Masam of India
21. Printed Textiles of India Calico Masam of India
22. Woven Textile of India Calico Masam of India
23. Costumes and Textiles of India by Parul Bhatnagar; Abhishek Publisher, Chandigarh
24. Fabric Painting by Jill Kennedy Verral

## **ECOLOGY AND ENVIRONMENTAL AWARENESS CAMP**

A diploma holder must have knowledge of different types of pollution caused due to industries and constructional activities so that he may help in balancing the eco system and controlling pollution by pollution control measures. He should also be aware of environmental laws related to the control of pollution.

This is to be organized at a stretch for 3 to 4 days. Lectures will be delivered on following broad topics. There will be no examination for this subject.

1. Basics of ecology, eco system and sustainable development
2. Conservation of land reforms, preservation of species, prevention of advancement of deserts and lowering of water table
3. Sources of pollution - natural and man made, their effects on living and non-living organisms
4. Pollution of water - causes, effects of domestic wastes and industrial effluent on living and non-living organisms
5. Pollution of air-causes and effects of man, animal, vegetation and non-living organisms
6. Sources of noise pollution and its effects
7. Solid waste management; classification of refuse material, types, sources and properties of solid wastes, abatement methods
8. Mining, blasting, deforestation and their effects
9. Legislation to control environment
10. Environmental Impact Assessment (EIA), Elements for preparing EIA statements
11. Current issues in environmental pollution and its control
12. Role of non-conventional sources of energy in environmental protection