2.1 COMMUNICATION SKILLS – II

L	T	P
3	-	2

RATIONALE

Interpersonal communication is a natural and necessary part of organizational life. Yet, communicating effectively can be challenging because of our inherent nature to assume, overreact to and misperceive what actually is happening. Poor communication or lack of communication is often cited as the cause of conflict and poor teamwork. In today's team-oriented workplace, managing communication and developing strategies for creating shared meaning are crucial to achieve results and create successful organizations. The goal of the Communicating Skills course is to produce civic-minded, competent communicators. To that end, students must demonstrate oral as well as written communication proficiency. These include organizational and interpersonal communication, public address and performance. The objectives of this subject are understanding how communication works, gaining active listening and responding skills, understanding the importance of body language, acquiring different strategies of reading texts and increasing confidence by providing opportunities for oral and written expressions

DETAILED CONTENTS

Section A

1. Grammar and Usage (15 Hrs)

1.1 Prepositions
1.2 Pronouns
1.3 Determiners
1.4 Conjunctions
1.5 Question and Question Tag
1.6 Tenses (Simple Present, Simple Past)

Section B

2. Reading Skills (15 Hrs)

Unseen comprehension passages (at least 5 passages).

3. Writing Skills (18 Hrs)

3.1 Writing Notice
3.2 Writing Circular
3.3 Writing a Memo
3.4 Agenda for a Meeting

3.5 Minutes of the Meeting
3.6 Telephonic Messages
3.7 Paragraph writing:
Simple and Current Topics should be covered.

LIST OF PRACTICALS

(Note: The following contents are only for practice. They should not be included in the final theory examination)

1. Listening Comprehension

1.1 Locating Main Ideas in a Listening Excerpt
1.2 Note-taking

2. Developing Oral Communication Skills

2.1 Offering-Responding to Offers
2.2 Requesting-Responding to Requests
2.3 Congratulating
2.4 Expressing Sympathy and Condolences
2.5 Expressing Disappointments
2.6 Asking Questions-Polite Responses
2.7 Apologizing, Forgiving
2.8 Complaining
2.9 Persuading
2.10 Warning
2.11 Asking for and Giving Information
2.12 Giving Instructions
2.13 Getting and Giving Permission
2.14 Asking For and Giving Opinions

INSTRUCTIONAL STRATEGY

Looking into the present day needs of effective communication in every field, it is imperative to develop necessary competencies in students by giving practical tips and emphasis on grammar, vocabulary and its usage in addition to practical exercises. The teacher should give report writing assignments, projects etc. while teaching this subject.

LIST OF RECOMMENDED BOOKS

1. Communicating Effectively in English, Book-I by Revathi Srinivas; Abhishek Publications, Chandigarh.
2. High School English Grammar and Composition by Wren & Martin; S. Chand & Company Ltd., Delhi.
3. Communication Techniques and Skills by R. K. Chadha; Dhanpat Rai Publications, New Delhi.

SUGGESTED DISTRIBUTION OF MARKS

Topic No.	Time Allotted (Hrs)	Marks Allotted (%)
1	15	30
2	15	35
3	18	35
Total	**48**	**100**

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

Instructions 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 APPLIED SCIENCES

L T P
4 - -

RATIONALE

Applied physics includes the study of a large number of diverse topics all related to things that go in the world around us. It aims to give an understanding of this world both by observation and prediction of the way in which objects will behave. Concrete uses of physical principles and analysis in various fields of engineering and technology are given prominence in the course content. The role of Chemistry and chemical products in every branch of engineering is expanding greatly. Now a days various products of chemical industries are playing important role in the field of engineering with increasing number of such products each successive years. The strength of materials, the chemical composition of substances, their behaviour when subjected to different treatment and environment, and the laws of heat and dynamic energy have entered in almost every activity of modern life. Chemistry is considered as one of the core subjects for diploma students in engineering and technology for developing in them scientific temper and appreciation of chemical properties of materials, which they have to handle in their professional career. Effort should be made to teach this subject through demonstration and with the active involvement of students.

DETAILED CONTENTS

Part-1 (APPLIED PHYSICS)

1. Units and Dimensions (06 hrs)

1.1 Physical quantities
1.2 Fundamental and derived units
1.3 Systems of units (FPS, CGS, MKS and SI units)
1.4 Dimensions and dimensional formulae of physical quantities (area,volume, velocity, acceleration, momentum, force, impulse, work, power, energy, surface tension, coefficient of viscosity and strain)

2. Force and Motion (04 hrs)

2.1 Scalar and vector quantities – examples, addition and multiplication (scalar product and vector product) of vectors
2.2 Force, resolution and composition of forces – resultant, parallelogram law of forces

3. Work, Power and Energy (08 hrs)

3.1 Work: definitions and its SI units
3.2 Work done in moving an object on horizontal .
3.3 Power: definitions and its SI units, calculation of power in simple cases
3.4 Energy: Definitions and its SI units: Types: Kinetic energy and Potential energy, with examples

3.5 Principle of conservation of mechanical energy (for freely falling bodies) transformation of energy from one form to another

4. Properties of Matter (08 hrs)

4.1 Elasticity, definition of stress and strain
4.2 Different types of modulus of elasticity
4.3 Pressure – its units, gauge pressure, absolute pressure, atmospheric pressure
4.4 Surface tension – its units, applications of surface tension, effect of temperature And impurity on surface tension
4.5 Viscosity and coefficient of viscosity

5. Temperature and its measurement (04 hrs)

5.1 Principles of measurement of temperature and different scales of temperature
5.2 Difference between heat and temperature on the basis of K.E. of molecules

6. Transfer of Heat (02 hrs)

6.1 Modes of transfer of heat (conduction, convection and radiation with examples)

Part-II APPLIED CHEMISTRY

1. **Language of Chemistry** (08 hrs)

1.1 Definition of symbol, formula, valency and chemical equation.
1.2 Writing of the chemical formula of a simple chemical compound. Calculation of percentage composition of a chemical compound
1.3 Essentials of a chemical equation, balancing of a chemical equation by Hit and Trial method

2. **Water** (08 hrs)

2.1 Hard and soft water, types of hardness and its causes, disadvantages of hardness of water (i) in industrial use (ii) in boilers for steam generation.
2.2 Methods to remove hardness of water (i) Clark's Process (ii) Permutit Process (iii) Soda Lime process .
2.3 Definition of degree of hardness of water and the systems to express the degree of hardness of water.
2.4 Qualities of water used for drinking purposes, treatment of river water to make it fit for town supply

3. Solutions (08 hrs)

3.1 Concept of homogenous solution, brief introduction of the terms (i)Ionization (ii) Acidity (iii) Basicity (iv) equivalent weight and gram equivalent weight with suitable examples

3.2 Strength of a solution (i) Normality (ii) Molarity (iii) Molality as applied in relation to a solution.

3.3 Definition of pH, and different industrial applications of Ph

4. **Electrolysis** (08 hrs)

4.1 Definition of the terms: Electrolytes, Non-electrolytes conductors and non-conductors with suitable examples

4.2 Faraday's Laws of Electrolysis

4.3 Different industrial applications of 'Electrolysis'

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INSTRUCTIONAL STRATEGY

Teachers may take help of various models and charts while imparting instructions to make the concepts clear. More emphasis may be laid on discussing and explaining practical applications of various chemical processes and reactions. In addition, students should be encouraged/motivated to study those processes in more details, which may find practical applications in their future professional life.

RECOMMENDED BOOKS

Applied Physics

1. Applied Physics Vol. I, TTTI Publication Tata McGraw Hill, Delhi

2. Basic Applied Physics by RK Gaur; Dhanpat Rai Publications

3. Comprehensive Practical Physics - Volume I and II by JN Jaiswal; Laxmi Publishers

4. Numerical Problems in Physics - Volume I and II by RS Bharaj; Tata McGraw Hill

5. Simple Course in Electricity and Magnetism by CL Arora; S Chand and Co, New Delhi

6. Fundamental Physics - Volume I and II by Gomber and Gogia; Pardeep Publications, Jalandhar

7. Physics Laboratory Manual by PK Palanisamy, Scitech Publications

8. Fundamentals of Physics by Resnick and Halliday, Asian Books Pvt. Ltd., New Delhi

9. Concepts in Physics by HC Verma; Bharti Bhawan Ltd., New Delhi

Applied Chemistry

10. Chemistry in Engineering by J.C. Kuriacose and J. Rajaram; Tata McGraw-Hill Publishing Company Limited, New Delhi

11. Engineering Chemistry by Dr. S. Rabindra and Prof. B.K. Mishra; Kumar and Kumar Publishers (P) Ltd. Bangalore-40

12. "A Text Book of Applied Chemistry-I" by SS Kumar; Tata McGraw Hill, Delhi

13. "A Text Book of Applied Chemistry-I" by Sharma and Others; Technical Bureau of India, Jalandhar

14. Engineering Chemistry by Jain PC and Jain M

15. Chemistry of Engineering by Aggarwal CV

16. Chemistry for Environmental Engineers by Swayer and McCarty, McGraw Hill, Delhi

17. Progressive Applied Chemistry –I and II by Dr. G.H. Hugar; Eagle Prakashan, Jalandhar

SUGGESTED DISTRIBUTION OF MARKS

Topic	Time Allotted (Hrs)	Marks Allotted (%)
APPLIED PHYSICS		
1	**06**	**08**
2	**04**	**06**
3	**08**	**13**
4	**08**	**13**
5	**04**	**06**
6	**02**	**02**
APPLIED CHEMISTRY		
1	**08**	**13**
2	**08**	**13**
3	**08**	**13**
4	**08**	**13**
Total	**64**	**100**

2.4 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

Theory	Practical Exercises
1. Introduction to mixing and blending (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)	9.1 Understanding of dyeing and printing through textile mill visit

INSTRUCTIONAL STRATEGY

The students 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

SUGGESTED DISTRIBUTION OF MARKS

Topic	Time Allotted (Hrs)	Marks Allotted (%)
1	**03**	**06**
2	**07**	**16**
3	**04**	**08**
4	**05**	**10**
5	**08**	**18**
6	**02**	**04**
7	**07**	**14**
8	**06**	**12**
9	**06**	**12**
Total	**48**	**100**

2.5 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. Diamond weaves and their construction (4 hrs)

3 Simple honey comb, brighton honey comb, hucbaback, sponge and similar weaves (5 hrs)

4. Mock leno weave and distorted thread effects (4 hrs)

5. Construction of bed ford cord and wadded bed ford (4 hrs)

6. Welts and piques, methods of embellishing pique fabrics their structure, plain pique backed pique, fast backed welts and waved pique (Mill visit) (8 hrs)

7. Backed fabrics, warp and weft backed fabrics, wadded warp and weft backed fabrics their beaming and drafting procedure (6 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 (11 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

INSTRUCTIONAL STRATEGY

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

SUGGESTED DISTRIBUTION OF MARKS

Topic	Time Allotted (Hrs)	Marks Allotted (%)
1	06	12
2	04	08
3	05	10
4	04	08
5	04	08
6	08	18
7	06	12
8	11	24
Total	48	100

2.6 ART APPRECIATION IN INDIAN TRADITIONAL TEXTILE DESIGN - II

L	T	P
5	-	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: (36 hrs) - Historical significance - Printing Techniques - Styles, colour and dyes and motifs - Centres of production a) Kalamkari b) Gujrat and Rajasthan (Block Printing) c) Madhubani	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: (34 hrs) Historical significance - Dyeing techniques - Styles, colour and Motifs - Centres of Production a) Patola, Ikat and Pochampalli b) Bandhani of Rajasthan and Gujrat	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 (Tufted and knotted carpets) (10 hrs)	3.1 Replication of designs (2 to 4 designs each) 3.2 Assignment to students on design 3.3 Presentation of assignments

INSTRUCTIONAL STRATEGY

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

SUGGESTED DISTRIBUTION OF MARKS

Topic	**Time Allotted (Hrs)**	**Marks Allotted (%)**
1	36	46
2	34	42
3	10	12
Total	**80**	**100**