I.I SEMESTER SYLLABUS

COMMUNICATING EFFECTIVELY IN ENGLISH

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 achieving results and creating successful organizations. The goal of the ***Communicating Effectively in English*** 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.

Objectives of Course in Communicating Effectively in English for the First Year (I & II Semesters) are:

* *Understanding how communication works*
* *Gaining active listening and responding skills*
* *Understanding the importance of body language*
* *Acquiring different strategies of reading texts*
* *Increasing confidence by providing opportunities for oral and written expressions*

DETAILED CONTENTS FOR FIRST SEMESTER

I SEMESTER **48 HRS**

1. COMMUNICATION SKILLS 6 hrs

1.1 Verbal and Non-verbal Communication

1.2 Process of Communication

1.3 Barriers to Communication; Overcoming Strategies

1.4 Listening and Speaking Skills and Sub-Skills

2. Spoken English-Introduction, Features of Spoken English

(Note: This module is only for practice. This should not be included in the final examination)

2. DEVELOPING ORAL COMMUNICATION SKILLS **8 hrs**

2.1 Greeting, Starting a Conversation

2.3 Introducing Oneself

2.4 Introducing Others

2.5 Leave Taking

2.6 Thanking, Wishing Well

2.7 Talking about Oneself

2.8 Talking about Likes and Dislikes

3. GRAMMAR AND USAGE **12 hrs**

3.1 Punctuation

3.2 Articles-a, an, the

3.3 Framing Questions

3.4 Verbs-Classification: Main Verb, Auxiliary Verb, Transitive & Intransitive Verbs, Phrasal Verbs

3.5 Word Formation

4. WRITING SKILLS **10 hrs**

4.1 Writing Paragraphs

4.2 Picture Composition

5. READING SKILLS **12 hrs**

5.1 Vocabulary Enhancement

5.2 Techniques of Reading: Skimming, Scanning, Intensive and Extensive Reading

NOTE: The Reading Skills of the learners (along with vocabulary enhancement) will be through reading thematic articles/essays and/or stories.

Section I

Theoretical Concepts of Communication Skills

Section II

Oral Communication Skills

Section III Reading Skills

Section IV

Writing Skills

Section V

Grammar and Usage

1.2 TEXTILE SCIENCE -I

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3	-	2

RATIONALE

The knowledge and skills related to textile science is essential to provide a comprehensive insight into the basic knowledge about fibers, yarns and relevant properties affecting the ultimate performance and use of fabrics by the consumer, hence the subject is included in the curriculum

DETAILED CONTENTS

	THEORY	PRACTICAL EXERCISE
1.	Introduction to textile fibre, yarn and fabric	
	a) Classification of important textile fibres based on their origin and constituents	Physical analysis of fabrics composed of different fibres: cotton, jute, linen, wool silk, polyster, nylon, acrylic, spandex, viscose, rayon
	b) Important properties of fibres: cotton, jute, linen, wool silk, polyster, nylon, acrylic, spandex, viscose rayon	Visual examination of Fibres and yarns
	- Relating to appearance (Colour, Lustre, Shape, Surface, Contour, Length, Diameter) - Relating to Performance (Strengths/Tenacity) - Relating to Maintenance (Effect of biological organisms, chemicals, thermal conductivity and other environmental conditions	Identification of fibres in a fabric sample through: - Burning test - Microscopic test - Chemical test
2.	New fibres and their properties – Tencel, lycra and technical textiles	
3.	a) Relevance of Thread count; linear density, balance yarn slippage to fabric performance	To determine the thread count, balance linear density and yarn slippage of the following fabrics: Cotton (casement, cambric), Viscose rayon, silk, polyester, Nylon

	THEORY	PRACTICAL EXERCISE
4.	Yarn Processing	
	a) Manufacturing of cotton, linen, wool and silk	Visit to Spinning Mill or relevant video films to understand the various systems of yarn spinning – staple, filament and spun filament yarns
	b) Sequence of spinning operation for making spun	
	c) Spinning – mechanical, chemical and melt	
	d) Type of yarns and their properties relevant to fabric behaviour - Simple yarns: single, ply, cord - Novelty yarns: slub, boucle, chenille, nubs, corkscrew, grendelle - Textured yarns: stretch yarns, bulk yarns, core-spun yarns - Blended yarns - Yarn twist, yarn count/size - Theory of direct and indirect method of yarn numbering systems	To analyze and understand fabric texture (appearance and hand) on the basis of the yarns used: - Fabrics using simple yarns - Fabrics using novelty yarns - Fabrics using filaments: textured, non-textured, spun filaments - Yarn testing for twist, ply count/ size (measurement) - Yarn strength - direct and indirect method (yarn-numbering systems)
	e) Understanding of various textile testing equipment with relevance to Yarn twist, yarn strength, crimp, yarn count, fabric strength, abrasion resistance, crease recovery	Visits to a textile testing laboratory for demonstration of various textile testing equipment to assess the quality of yarn and fabric properties
5.	Fabric structure and properties relevant to consumer requirements such as:	
	a) Weaving - Fundamentals	Prepare a catalogue of fabric samples made by using different methods of construction
	b) Fabrics formed directly from the fibers: felts, non-wovens, flocked, quilted fabrics	

	THEORY	PRACTICAL EXERCISE
c)	Fabrics formed directly from the yarns	Visit to Mill units producing, wovens and non-wovens to understand type of looms and processes or relevant video film may be shown
	Wovens: - Type of looms – pit looms, loin loom, table loom, dobby and jacquard, shuttleless - Accessories – shuttle, reed, healed, batten - Basic weaves – plain, twill, satin - Decorative weaves, swirel, lappet, spot, dobby, jacquard, pile - Weaving defects	A visit to the cottage industry/ handloom sector to understand the working of a loom and types of woven fabrics To identify the woven fabrics for: a) Warp and weft b) Face and Back c) Prepare a point-paper diagram of basic weaves and their variations d) Prepare a list of fabrics available under each category of weave
	- Selvedge and their types: fused, toped fringed	Identify types of selvedges: market survey of fabrics composed of different fibres and categorized for: - Variation in textures (smooth to rough) - Variation in weight (light weight to heavy weight) - End uses - Trade names

Assignments for the Students

Prepare a catalogue of fabric samples under following heads:

i) Fibre Composition – Names by which they are available
ii) Yarn Structure – Texture variation
ii) Fabric Structure – Characteristic, Different methods of construction and their variations

Note: The teacher may develop master samples to demonstrate various processes. The students may be asked to prepare swatch files. The students should be taken for a visit to spinning mills to show the various processes or relevant video films may be screened.

RECOMMENDED BOOKS

1. Understanding Textiles by Phyllis Tortora
2. Modern Textiles by Rothy Siegert Lyle
3. Encyclopedia of Textiles, Fibres and Non-woven Fabrics
4. Textiles Fiber to Fabric – P Corbman
5. Fabric Science by Joseph Pizzuto
6. Essentials of Textiles by Marjery Josphe; Holt, Rinehart and Winston, Inc
7. Textile Fibres and their Uses by KP Hess

1.3 ELEMENTS OF DESIGN

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2	-	4

RATIONALE

The knowledge and skill related to elements of design is essential for the students of diploma programme of fashion technology in order to develop the understanding regarding how to make a design using lines, dot, shape and colour combination

DETAILED CONTENTS

	THEORY	PRACTICAL EXERCISE
1.	Understanding design	
2.	Relationship to design in daily life	Examples of design from daily life objects and nature
3.	Elements of design a) Lines; b) Dots; c) Shapes, How the line; dots and shapes are used in relation to the figure	Illustrate different type of lines (dotted, broken vertical, horizontal, diagonal, zigzag, curved, thick and thin)
4.	Colour - theory, primary, secondary, sub-secondary, hue, value, intensity, tints, shades, tones, analogues achromatic, Mono- chromatic, polychromatic, warm and cool; transparent and opaque, rainbow; contrast complimentary and split complimentary colours relating to season/ moods/ragas	Corresponding colour exercises to be carried out such as colour wheel, tints, shades, tones, colour schemes Field visit to market/industry to understand colour in fabrics/nature
5.	Elements a) texture – smooth, shine, rough etc b) Silhouette	Practical exercises for texture and silhouette in fabric and other objects/nature and human body
6.	Design variations	Practice on variations of necklines, collars, bodice, skirt, trousers, belts, sleeves, pockets, yokes, tucks/pleats

Note: The teacher should encourage the students to do market surveys, field visits, fairs and exhibition visits to understand the elements of design and colour theory

RECOMMENDED BOOKS

1. Fashion Drawing Designs; Magazine of Thailand
2. Pattern Designs for Haute Couture, Volume 1
3. Fashion Drawing – The Basic Principles by Anne Allen and Julion seaman
4. Latest Fashion Style by Winter Hiver
5. Jasmine's New Look, On Indian Fashion Scene
6. Lifestyles: Fashion Styles by Katheryn Samuel
7. Spring and Summer Collection; Tokyo, New York

1.4 BASIC PATTERN MAKING AND STYLE INTERPRETATION - I

L	T	P
2	-	6

RATIONALE

The students should know various considerations in making of garments, incorporation of standard measurements, scope and importance of drafting and pattern making so that they are able to take measurements, interpret the style of any given design and make the pattern. The subject, therefore deals with basics of pattern making and styling of garments.

DETAILED CONTENTS

THEORY

1. Introduction to standard measurements, standards measurement charts, methods of taking measurements (direct, indirect, landmarks) (06 hrs)

   Classification of measurements – circumference, horizontal and vertical measurements

2. Methods of developing pattern (04 hrs)

   - flat pattern
   - draping

3. Pattern making tools (04 hrs)

   pins and pin holders, scissors, measuring tapes, french curves, scales, curve scales, notcher, tracing wheel, pattern papers, markers etc.

4. Introduction to style interpretation (04 hrs)

   What is style interpretation? How it is done? What are its benefits

5. Pattern making terms (14 hrs)

Pattern drafting, flat pattern making, basic pattern set, templates, working pattern, production pattern, design specification sheet, pattern chart, cost sheet, grain, warp, weft, selvedge, bias, true bias, apex, dart, dart legs, dart intake, trucing and blending, plumb line, vertical, horizontal and perpendicular lines, symmetrical and asymmetrical lines, style no., pattern size, pivotal point, pattern manipulation

LIST OF PRACTICALS

1. - Taking measurements directly from body
   - Locating land marks and taking anthropometrics measurements
   - Taking measurements from the garments

2. Practice on use of:

   - Squares and scales
   - French curve – for arm hole, necklines etc.
   - Practice on use of other equipment

3. Analysis of apparel designs from magazines

4. Drafting of :

   - Child's panty
   - Bloomer
   - Child's bodice block and sleeve block
   - Child's skirt block

Note: The students may be taken to the nearby manufacturing organizations to demonstrate various pattern making and style interpretation processes.

RECOMMENDED BOOKS

1. Pattern Making for Fashion design by Helen Joseph Armstrong

2. The ABC's of Grading by Murray Sacheir

3. Basic Pattern Skills for Fashion Design by Bernard Zamkoft

4. Design Apparel Through the Flat Pattern by Ernestine Kopp

5. Pattern Cutting and Making up by Martin Shoben

1.5 FASHION ILLUSTRATION - I

L	T	P
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RATIONALE

The skill in fashion illustration is essential for the students of fashion technology so as to develop in them the creativity and ability to illustrate different types of figures and dresses in different colour media. . After going through this subject, the student of fashion technology will be able to illustrate different types of figures and dresses.

DETAILED CONTENTS

PRACTICAL EXERCISES

1. Concept of fashion drawings

2. a) Fashion Careers that require sketching
   b) Maintenance of scrap book

3. Knowledge of Drawing Equipment and Tools
   - Paper
   - Markers and Pencils
   - Drawing Board
   - Ruler
   - Tape
   - Erasers
   - Knives
   - Different media (charcoal, ink, Water Colour etc)
   - Outdoor sketching – Central market, Park, Railway Station and Museum

4. Fashion figure (difference between normal and fashion figures)

5. Drawing the eight Head figure/Stick figures/Block figures

6. Bone Strcture

7. Muscle view

8.	Front view		½ sheet each
9.	Side view		
10.	Back pose		
11.	Structure of legs		
12.	Structure of hands		
13.	Drawing the foot		
14.	Enlargement and reduction		
15.	Facial proportion		
16.	Drawing the face, step by step		
	- Draw a rectangle	1 No.	
	- Divide the rectangle	1 No.	
	- Measurement	1 No.	¼ Sheet each
17.	Features Drawing	2 Nos.	
18.	The profile		
19.	Profile head step by step		
	- Turning Head	2 Nos.	
	- Three-dimensional head	2 Nos.	
20.	Drawing of hair step by step		
21.	Typical view	2 Nos.	

RECOMMENDED BOOKS

1. Fashion Drawing Designs by Magazine of Thailand

2. Fashion Drawing – The Basic Principles by Anne Allen and Julion Seaman

3. Fashion Illustration by Bina Abling

1.6 GARMENT CONSTRUCTION - I

L	T	P
-	-	8

RATIONALE

The diploma holders in fashion technology are supposed to fabricate various components of garments such as pleats and gather, darts, tucks etc., as per measurements and go for mass production for all ages and size. Hence this subject has been included in the curriculum to develop such competencies in the students. The subject deals with basics of garment construction technology.

DETAILED CONTENTS

	INSTRUCTIONS FOR PRACTICALS	PRACTICAL EXERCISES
1.	Tools and equipment used for garment construction	Practice on threading, oiling, handling and care of sewing machine and over lock machine
2.	Defects and remedies of a sewing machine	Machine control exercises on speed control, Paper exercises, Fabric exercises
3.	Straight line, square, concentric square, curved, circle (4 lectures)	
4.	Classification of seams: - Flat, raised, decorative	Practice on various samples of machine seam – plain, run and fell, French, lapped seam, counter seam, mantira makers, counter hem, top seam, slot seam, beading
5.	Variation of pleats and gathers	Preparation of variation of pleats and gathers

6	Darts, tucks – sample	Preparation of darts, tucks
7.	Gathers, shirring	Preparation of samples for gathers and shirring
8.	Types of fasteners – hooks, shapes, loops, button, velcro, snaps	Practice on various types of fasteners
9.	Edge finishing of garments	Practice on variations of garments edge finishing by hemming, piping and binding

ASSIGNMENT

Preparation of a baby frock incorporating the above techniques

RECOMMENDED BOOKS

1. Clothing Construction by Doongaji
2. System of Cutting by Zarapkar
3. Clothing Construction by Evelyn A Mansfield, Hougutan Miffin Co., Boston
4. Creative Sewing by Allynie Bane; McGraw Hill Book Co., Inc., New York
5. How you Look and Dress by Byrta Carson; McGraw Hill Book Co., Inc., New York
6. Fashion Maker by Betty Foster
7. Fashion Clothes- She by Debbie Bliss, Sue Penerill
8. Basic Processes and Clothing Construction by Sherie Doongaji and Raushini Despande
9. Simplicity Revised ABC of Short-Cut Sewing
10. The Brides Sewing Book by Anne Ladbury
11. Stitch by Stitch by Tarstar Books
12. Complete Guide to sewing by Reader’s Digest

1.7 GENERAL WORKSHOP PRACTICE – I & II

RATIONAL

Manual abilities to handle engineering materials with hand tools need to be developed in the students. They will be using different types of tools/equipment in different shops for fabrication purposes. Besides developing the necessary skills, the students will appreciate the importance of quality and safety measures.

DETAILED CONTENTS

Note: 1. The students are supposed to come in proper workshop dress prescribed by the institute. Wearing shoes in the workshop(s) is compulsory. Importance of safety and cleanliness, safety measures and upkeep of tools, equipment and environment in each of the following shops should be explained and practiced. The students should prepare sketches of various tools/jobs in their practical Notebook.

2. The shops to be offered in I and II semester may be decided at polytechnic level

3. The students should be taken to various shops (not included in the curriculum) in the polytechnic in batches and should be given knowledge of the various machines/equipment. Such as machine shop, foundry shop, sheet metal shop, etc.

4. Students of Diploma in Chemical Engineering will undergo Shops 1 to 6 only

Following seven shops are being proposed:

1. **Carpentry shop**
2. **Fitting and plumbing shop**
3. **Welding shop**
4. **Paint shop**
5. **Forging and sheet metal shop**
6. **Electric shop**
7. **Electronics Shop**

1. Carpentry Shop

1.1 Introduction to various types of wood, carpentry tools - their identification

with sketches. Different types of wood joints.

1.2 Simple operations viz. hand sawing, marking, planning

1.3 Introduction and sharpening of wood working tools and practice of proper adjustment of tools

1.4 Demonstration and use of wood working machines i.e. band saw, circular saw, rip saw, bow saw and trammels. Universal wood working machine and wood turning lathe

1.5 Making of various joints (Also draw the sketches of various wooden joints in the Practical Note Book)

a) Cross lap joint

b) T-lap joint

c) Corner lap joint

d) Mortise and tenon joint

e) Dovetail joint

f) Prepare a file handle or any utility items by wood turning lathe

2. Fitting and Plumbing Shop

2.1. Introduction to fitting shop, common materials used in fitting shop, description and demonstration of various types of work-holding devices and surface plate, V-block

2.2 Demonstration and use of simple operation of hack-sawing, demonstration of various types of blades and their uses

2.3 Demonstrate and use of all important fitting shop tools with the help of neat sketches (files, punch, hammer, scraper, taps and dyes etc.)

2.4 Introduction of chipping, demonstration on chipping and its applications. Demonstration and function of chipping tools.

2.5 Description, demonstration and practice of simple operation of hack saw, straight and angular cutting.

2.6 Demonstrations, description and use of various types of blades - their uses and method of fitting the blade.

2.7 Introduction and use of measuring tools used in fitting shop like: Try square, Steel rule, Measuring Tape, Outside micrometer, Vernier Caliper and Vernier Height Gauge

2.8 Description, demonstration and practice of thread cutting using taps and dies

2.9 Plumbing: Descriptions and drawing of various plumbing shop tools, Safety precautions. Introduction and demonstration of pipe dies, Pipe holding

devices, Demonstration and practice of Pipe Fittings such as Sockets, Elbow, Tee, Reducer, Nipple, Union coupling, plug, Bend, Float valves and Taps

Job: Cutting and filing practice on a square of 45 X 45 mm^2 from MS flat

Job: Angular cutting practice of 45^0 (on the above job)

Job: Preparation of stud (to cut external threads) with the help of dies (mm or BSW)

Job: Drilling, counter drilling and internal thread cutting with Taps

Job: H-Fitting in Mild steel (ms) square

Job: Pipe cutting practice and thread cutting on GI Pipe with pipe dies

3. Welding Shop

3.1 Introduction to welding, type of welding, common materials that can be welded, introduction to gas welding equipment, types of flame, adjustment of flame, applications of gas welding. Welding tools and safety precautions

3.2 Introduction to electric arc welding (AC and DC), practice in setting current and voltage for striking proper arc, precautions while using electric arc welding. Applications of arc welding. Introduction to polarity and their use

3.3 Introduction to brazing process, filler material and fluxes; applications of brazing. Use of solder. Introduction of soldering materials

3.4 Demonstrate and use of the different tools used in the welding shop with sketches. Hand shield, helmet, clipping hammer, gloves, welding lead, connectors, apron, goggles etc.

3.5 Demonstration of welding defects and Various types of joints and end preparation

Job: Preparation of cap joint by arc welding

Job: Preparation of Tee joint by arc welding

Job: Preparation of single V or double V butt joint by using Electric arc welding

Job: Brazing Practice. Use of Speltor (on MS sheet pieces) Job:
Gas welding practice on worn-out and broken parts

4. Paint Shop

Introduction of painting shop and necessity. Different types of paints. Introduction of powder coating plant and their uses.

Job: Preparation of surface before painting such as cleaning, sanding, putty, procedure and application of primer coat, and painting steel item.

Job: Painting practice by brush on MS sheet

Job: Practice of dip painting

Job: Practice of lettering: Name plates / Sign board

Job: Polishing and painting on wooden and metallic surfaces

Job: Practical demonstration of powder coating

5. Forging and sheet metal shop

Introduction to forging, forging tools, tongs, blowers/pressure blowers, hammers, chisels, punch, anvil, swag-block etc. Forging operations.

5.1 Forge a L hook or Ring from MS rod 6 mm φ

5.2 Forge a chisel and give an idea of hardening and tempering

5.3 Lap joint with forge welding

5.4 High Strength Steel (HSS) tools – forging of Lathe shaper tools like side-tools and V-shape tools

5.5 Making sheet metal joints

5.6 Making sheet metal trey or a funnel or a computer chassis

5.7 Preparation of sheet metal jobs involving rolling, shearing, creasing, bending and cornering

5.8 Prepare a lap riveting joint of sheet metal pieces

6. Electric Shop

6.1 Demonstration of tools commonly used in Electric Shop

6.2 Safety precautions , electric shock treatment

6.3 Demonstration of Common Electric material like: wires, fuses, ceiling roses, battens, cleats and allied items

6.4 Demonstration of Voltmeter, Ammeter, Multimeter and Energy meter

Job: Wiring practice in batten wiring, plastic casing-capping and conduit

Job: Control of one lamp by one switch

Job: Control of one lamp by two switches Job: Control of one bell by one switch Job: Assemble a Tube light

Job: Dismantle, study, find out fault, repair the fault, assemble and test domestic appliances like electric iron, electric mixer, ceiling and table fan, tube-light, water heater (geyser) and desert cooler

Job: Laying out of complete wiring of a house (Single-phase and Three-

phase)

7. Electronics Shop

7.1 Identification, familiarization, demonstration and use of the following electronic instruments:

a) Multi-meter digital

b) Single beam simple CRO , function of every knob on the front panel

c) Power supply , fixed voltage and variable voltage, single output as well as dual output.

7.2 Identification , familiarization and uses of commonly used tools; active and passive components; colour code and types of resistor and potentiometers

7.3 Cut, strip, join and insulate two lengths of wires/cables (repeat with different types of cables/ wires)

7.4 Demonstrate and practice the skill to remove components/wiresby unsoldering

7.5 Cut, bend, tin component, leads, inserts. Solder components e.g. resistor, capacitor, diodes, transistors on a PCB

7.6 Wiring of a small circuit on a PCB/tag strip involving laying, sleeving and use of identifier tags

7.7 Demonstrate the joining (or connecting) methods/mounting and dismantling method, as well as uses of the items mentioned below:

a) Various types of plugs, sockets, connectors suitable for general-purpose audio video use. Some of such connectors e.g. 2 and 3 pin mains plug and sockets, Banana plugs, sockets and similar male and female connectors and terminal strips.

b) Various types of switches such as: normal/miniature toggle, slide, push button piano key, rotary, SPST, SPDT, DPST, DPDT, band selector, multi-way Master Mains Switch.

7.8 Exposure to modern soldering and de-soldering processes (Field visits)

7.9 De-solder pump, remove and clean all the components and wires from a given equipment, a PCB or a tag strip.