

GUJARAT TECHNOLOGICAL UNIVERSITY ,AHMEDABAD

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

COMMUNICATION SKILL-I

1.0 RATIONALE:

Communication skills include both the art of expressing or ideas in oral form and written form. Skills of expressing oneself or the art of talking is essential in architectural practice as one has to express himself in front of different people or in different situations e.g. explaining his work to a client or on construction sites. In general, one should be skill full enough to take part in discussions on different topics as well as to clearly express himself. Skill of written communication is very important to write business letters to clients, agencies etc. for this, one needs to improve his vocabulary thoroughly.

2.0 SCHEMES OF STUDIES :

SR NO	NAME OF COURSE	L	P
1	Communication skill-1	2	-

3.0 SCHEME OF TEACHING:

TOPIC NO.	NAME OF TOPIC	NO. OF HOURS		
		LECT.	PRACT.	TOTAL
1	Oral communication	08	--	08
2	Written communication	20	--	20

				28

4.0 TRS & EO's :

T.R.S

10.45 Express ideas effectively in English in oral form.

EO's

10.45.1 Explain importance of oral communication in architects office.

10.45.2 Speak on a topic fluently and confidently for five minutes(or more)

10.45.3 Give instruction orally

10.45.4 Use words and expressions appropriate to audience (persons, superiors, subordinates and others), occasions and purposes.

10.45.5 Participate in debates and conversations and group discussion.

T.R.S

10.46 Express views in English in written form effectively.

EO's

10.46.1 Write single sentence/multiple sentence answers to questions.

10.46.2 Write sentences using idioms, synonyms and antonyms.

10.46.3 Check the errors in English sentences.

T.R.S

10.47 Translate language.

EO's

10.47.1 Translate English into Gujarati/Hindi

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10.47.2 Translate Gujarati/Hindi into English

5.0 CONTENT OUTLINE

Topic 1 : Oral Communication

- 1.1 Importance of oral communication - particularly in the field of professionals. Art of talking in general.
- 1.2 Being pleasant and polite - showing readiness to talk without hesitation.
- 1.3 Selection of appropriate words and knowledge of words which appeals the most.
- 1.4 Verifying whether the intended meaning is conveyed to the party.
- 1.5 Discussion on formal and informal situations
- 1.6 Formal situation like - staff room, college office, principal office etc.
- 1.7 Informal situations like - house, street, college campus, class rooms etc.
- 1.8 Group Discussion -
- 1.9 Formal : on Professional and Technical topics.
- 1.10 Informal : Social, economic, political and cultural events.

Topic-2 Written Communication

- 2.1 Increasing vocabulary -- Use of hundred words - one word for phrases and their use in sentences.**(Appendix-101-A)**
- 2.2 Idioms -- Fifty idioms and their use in sentences.**(Appendix-101-B)**
- 2.3 Hundred important synonyms and antonyms.**(Appendix-101-C)**
- 2.4 Conversion of sentences from one tense to another.
- 2.5 Translation from English to Gujarati/Hindi. & from Gujarati/Hindi into English.
- 2.6 Words confused and misused - common hundred words and their use in sentences.**(Appendix-101-D)**

IMPORTANT NOTE : **The Questions of theory exam will be asked only from the Topic - 2. Viz. written communication using vocabulary from **Appendix 101-A to 101-D**.

**Viva & Mock exercises must be practiced to increase word power.

6.0 INSTRUCTIONAL STRATEGIES & KEY RESOURCES.

SR. No	T.R.S	E.O.	Instructional strategy	Key Resources
1	10.45	10.45.1	Oral and Assignment	Printed material
		10.45.2	Oral and Assignment	Printed material
		10.45.3	Oral and Assignment	Printed material
		10.45.4	Oral and Assignment	Printed material
		10.45.5	Oral and Assignment	Printed material
2	10.46	10.46.1	Oral and Assignment	Printed material
		10.46.2	Oral and Assignment	Printed material
		10.46.3	Oral and Assignment	Printed material
3	10.47	10.47.1	Oral and Assignment	Printed material
		10.47.2	Oral and Assignment	Printed material

: ONE WORD FOR MANY :

- Incapable of being believed OR That which can not be believed
- That which can be easily believed
- That which can not be depended upon
- That which cannot happen
- That which cannot explained
- That which can not be read
- That which can not be seen
- That which cannot be seen through
- That which cannot be solved
- That which does not bear the writer's name
- Fictions name used by an author
- That which does not allow water to go through
- That which can be easily bent
- That which is liable to be easily broken
- That which easily catches fire
- That which is contrary to law
- That which is sure to end in death
- That which happens at the same time
- That which prevails everywhere
- A word which has the same meaning as another
- A word which means the opposite of another word
- Word of same form as another but different sense
- A disease which affects large area
- A disease which spreads by connect from person to person
- A thing without which we cannot do
- Work for which no salary is paid
- A speech delivered without any preparation
- A child born after the death of his father
- A book with blank pages for holding photographs, stamps, pictures, signatures etc.
- A place where sick people are treated
- A place where dead bodies are buries
- One who looks upon the bright side of everything
- One who looks upon the dark side of everything
- One who looks upon the bright side of everything
- One who believes in God
- One who does not believe in God
- One who loves hrs fellowmen and works for them OR One who is a lover of mankind
- One who knows many languages
- One who has long experience of military service or any other occupation
- One who walks on foot, One who lives at the same time as another
- One who dies for a noble cause
- One who is new to any kind of business
- One who is a partner in a crime
- A Person who offers his services freely
- A women whose husband is dead
- A man who is not married
- A women who is not married
- One who does not know how to read and write
- One who is generally liked or admired by people
- One who easily believes whatever is told to him
- One who knows everything
- One who is present everywhere at the same time

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- One who has unlimited power
- Man who work in the same department of an office
- The science of vegetable life
- The science of heavenly bodies
- Science dealing with the phenomena of the atmosphere, especially weather and weather conditions
- The science of life
- The science of reasoning
- The science of wealth
- The science studying the human body
- The science studying the human mind
- The science foretelling the future from the study of the stars
- An instrument seeing minute objects
- A tank for fishes and water plants
- A machine for lifting and moving heavy weights
- A book written on one's own life
- A book written on another persons life
- The act of killing one's own self
- The act of killing a new born baby
- The act of killing one's own father
- The act of killing one's own mother
- The act of killing one's own brother
- The act of killing any person
- The property which a wife brings to her husband on marriage
- The act of stopping work as a protest
- A line of people waiting for something
- The dead body of a human body
- Examination of a dead body to find the cause of the death
- The dead body of an animal
- Government by the people, of the people and for the people
- Government by one
- Government by the nobles
- Government by the few
- Government by the rich
- Government by the officials
- Government by the king or queen
- Absence of Government
- A remedy for all disease
- Words inscribed on the tomb of a man
- A person who fillies in asp ace-ship
- The force that pulls objects towards the earth
- Pertaining to the East
- Pertaining to the West
- A person who prepares designs of buildings.

Topic-2.2 [Appendix-101-B]

IDIOMS AND IDIOMATIC PHRASES

- Look after
- Look forwarded
- Apple of one's eye
- To bell the cat
- In black and white
- By hook or by crook
- with flying colors
- Crocodiles tears
- To give ear to
- A hard nut to creak
- In a nutshell, In the nick of time
- A laughing stock
- Out and out
- At sixes and sevens
- At the eleventh hour at the last moment, Bed of roses
- (To) bury the hatchet
- (A) burning question
- By leaps and bounds
- (To) call a spade a spade
- (To) carry the day
- (A) fair-weather friend
- (To) get into hot water
- (To) grease the palm
- high time-ripe time-far advanced time
- (To) hit below the belt
- (To) kill two birds with one stone
- (A) leap in the dark
- (To) make both ends meet
- Nip in the bud
- Rank and file
- (A) red-letter day
- (To) break in
- (To) carry away
- (To) take after
- Apple of discord
- At large
- (To) blow one's trumpet
- A child's play
- In the air
- In high spirits
- In the long run
- Jack of all trades
- (To) lose ground
- (To) move heaven and earth
- Scot-free-unpunished
- (To) steal a march upon
- (To) take to task

Topic 2.3 [Appendix 101-c]

: SYNONYMS :

- Abandon
- Abnormal
- Abridge
- Abundant
- Accumulate
- Adequate
- Adequate
- Admiration
- Alien
- Apprehend
- Assistance
- Astonish
- Attack
- culms
- colossal
- concise
- cordial
- cruel
- Damage
- Decay
- Decorate
- Deficient
- Diligent
- Exceptional
- Extraordinary
- False
- Gaiety
- Guilt
- Humane
- Humility
- Illiterate
- Immaterial
- Irresolute
- Jolly
- Joy
- Laborious
- Liberal
- Lively
- loyal
- Lucky
- Magnificent
- Marvelous
- Mighty
- Misery
- Negligent
- Notable
- Persuade
- Refined
- Relevant
- Remorse
- Remote
- Resistance
- Serious
- Shy
- Special
- Specimen
- Static
- Stationary
- Confess
- Fatigue
- Illuminate
- Resolve
- Bind
- Exhibit
- Firm
- Neglect
- Tragic
- Luxury
- Pacify
- Reject
- Approve
- Claim
- Rural
- Optimistic
- Initial
- Tiny
- Range
- Synthetic
- Prompt
- Gloomy
- Discloses
- Fresh
- Lesser
- Collect

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- Progress
- Submit
- Eager
- Harmony
- Prohibited
- Praise
- Specific
- Broad
- Wild
- Opining
- Focus
- Tremendous
- Operate
- Accept
- Trumpet
- Liberty
- Famous,
- Entrance
- Exceptional
- External
- Exterior
- Failure
- fair
- Fine
- Flexible
- Folly
- Poring
- Freedom
- Gain
- General
- Gloomy
- happiness
- Hard
- Heavy
- Honest
- Honor
- Import
- Inferior
- Interested
- Interesting
- Joy
- Joyful
- Junior
- Knowledge
- Legal
- Legible
- Liberty
- Light
- Liquid
- Confess
- Fatigue
- Illuminate
- resolve
- Bind
- Collect
- Exhibit
- Firm
- Tragic
- Luxury
- Pacify
- Reject
- Approve

: ANTONYMS :

- Ability
- Accept
- Admire
- Ancient
- Arrival
- Artificial
- Beautiful
- Belief
- Bold
- Certain
- Cheap
- Cheerful
- Compare
- Compress
- Conceal
- Create
- Crude
- Deep
- Definite
- Descend
- Destruction
- Discourage
- Eligible
- Equality

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- Claim
- Rural
- optimistic
- Adequate
- Mobile
- Major
- Elastic
- Increase
- Cruel
- Disclose
- Fresh
- Lessen
- Triumph
- Progress
- Submit
- Neglect
- Eager
- Harmony
- Prohibit
- Praise
- Specific
- Bread
- Progress
- Wild
- Accuracy
- Maximum
- Necessary
- Success
- Ambiguous
- Abolish
- BARE & BERTH
- BIRTH & BESIDES
- CAST & CASTE
- CASUAL & CAUSAL
- CHECK & CHEQUE
- CITE & SIGHT
- CLIMACTIC & CLIMATIC
- COUNCIL & COUNBEL
- DAIRY & DIARY
- DECEASE & DISEABE
- DISSENT & DISENT
- DEFER & DIFFER
- DESERT & DESSERT
- DEVICE & DEVISE
- DOSE & DOZE
- ELICIT & ILLICIT
- ELIGIBLE & ILLEGIBLE
- ELUSIVE & ILLUSIVE
- EXTANT & EXTENT
- FAIR & FARE
- FLOOR & FLOUR
- GOAL & GOAL
- HAIR & HARE
- HEAL & HEEL
- IDLE & IDOL
- INGENIOUS & INGENUOUS
- LATHER & LATTER
- LIGHTNING & LIGHTNING
- LOAN & LONE
- LOOSE & LOSE
- MARRY & MERRY
- MONITORY & MONETARY
- PATROL & PETROL
- PEACE & PIECE
- PERSONAL & PERSONNEL
- PHYSIC & PHYSICS
- PHYSIQUE , PLAIN & PLANE
- PRACTICE & PRACTISE
- PRAY & PREY

[Appendix 101-D] WORDS OFTEN CONFUSED

- ACCEPT & EXCEPT
- ACCESSARY & ACCESSORY
- ADAPT & ADEPT
- AFFECT & EFFECT
- AIR & ERE
- HEIR , ALLUSION & ILLUSION
- ALTAR & ALTER
- APPOSITE & OPPOSITE
- ARTIST & ARTISAN
- ASCENT & ASSENT

**DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP
BUILDING MATERIAL - I**

1.0 RATIONALE:

This course introduces the student to the basic materials used in the construction industry. It also introduces the student to the manufacturing process and properties of these materials. Factors affecting the relation of materials are also discussed. Hence, this course provides a foundation for this programme.

2.0 SCHEMES OF STUDIES:

SR NO	NAME OF COURSE	L	P
1	Building Material-1	4	-

3.0 SCHEME OF TEACHING:

TOPIC NO.	NAME OF TOPIC	NO. OF HOURS		
		LECT.	PRACT.	TOTAL
1	Introduction	03		03
2	Stone	10		10
3	Bricks	10		10
4	Clay Products	05		05
5	Binding Materials	08		08
6	Cement Products	03		03
7	Aggregate	03		03
8	Timber	08		08
9	Ferrous Metal	03		03
10	Non-ferrous metal	03		03
		56		56

4.0 TRS & EO's

T.R.S

7.34 Select suitable material for various items of building construction.

E.O.

7.34.1 Understand properties and uses of various materials used for building construction.

7.34.2 Compare the different alternative materials suitable to given job.

7.34.3 Select the suitable materials for building construction for the given job.

5.0 CONTENT OUTLINE

Topic -1 Introduction

- 1.1 Scope of subject
- 1.2 Enlist the various materials used in building industry

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- 1.3 Properties of the given building materials
- 1.4 Factors affecting the selection of material

Topic-2 Stone

- 2.1 Requirements, Characteristics. Uses of Building Stone. Different types of Stone like Granite, Basalt, Lime Stone, Slate, Marble, Sandstone.
- 2.2 Visual Physical inspection of different types of stone.

Topic -3 Bricks

- 3.1 Introduction to manufacturing of bricks.
- 3.2 Basic requirements of building bricks.
- 3.3 Properties and uses of different types of bricks.
- 3.4 Understand the situations where different types of bricks are used (with Sketches) bull nose, plinths chequered, king closer, queen closer, coping, cornice, arch, hollow, perforated.

Topic - 4 Clay Products:

- 4.1 Different types of clay products:
 - 4.1.1 Roofing Tiles
 - 4.1.2 Earthenware products
 - 4.1.3 Stoneware products
 - 4.1.4 China clay products
 - 4.1.5 Terra cotta and other clay wares, porcelain.

Topic - 5 Binding Materials:

- 5.1 Lime:- Types, properties & uses of different types of Lime.
- 5.2 Comparison among properties of different types of lime.
- 5.3 Lime mortar, different proportions
- 5.4 Properties of good mortar
- 5.5 Storing & slaking of lime
- 5.6 Field test of lime.
- 5.7 Cement:- - Chemical composition of O.P.C.
- 5.8 Different types of cement and its properties and uses.
- 5.9 Field test & laboratory test on cement.
- 5.10 Storage of cement.
- 5.11 Cement mortar, its proportion and uses.
- 5.12 Comparison between cement and lime as binding materials.

Topic -6 Cement Products:

- 6.1 Asbestos cement sheets
- 6.2 A.C. Pipes
- 6.3 Cement hollow blocks, cement Jali & decorative Post for railing.

Topic -7 Aggregate:

- 7.1 Types of aggregate, coarse and fine.
- 7.2 Properties and uses of aggregate.
- 7.3 Characteristics of good aggregate.

Topic -8 Timber:

- 8.1 Characteristics of good timber.
- 8.2 Identification of timber (Sag, Deodar, Teak etc.)
- 8.3 Defects in Timber:
 - 8.3.1 Natural defects
 - 8.3.2 Defects due to seasoning
 - 8.3.3 Defects due to fungi & insects.
- 8.4 Seasoning of timber and its importance.
- 8.5 Necessity of applying preservative to timber .

Topic -9 Ferrous Metal

- 9.1 Steel -- Properties, uses of different types of Steel

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(1) C.I. (2) W.I. (3) M.S.

- 9.2 Different forms of M.S. Sections.
- 9.3 Various categories of steel.
- 9.4 Advantages of Tor Steel over Mild Steel (M.S)

Topic -10 Non-Ferrous Metal

- 10.1 Aluminum
- 10.2 Properties & uses of Aluminum
- 10.3 Aluminum alloys- Properties & uses.
- 10.4 Different market forms of Aluminum.

6.0 INSTRUCTIONAL STRATEGIES AND KEY RESOURCES

Sr. No.	T.R.S	E.O.	Instructional Strategy	Key Resources
1	7.35	7.35.1	Input cum discussion followed by practice Assignment.	Manufacturer's data sheets Materials(i.e. thermocol clay. etc)
	7.35.2		Input cum discussion followed by practice Assignment.	
	7.34.3		Input cum discussion followed by practice Assignment.	

NOTE: MARKET SURVEY OF LATEST NEWLY AVAILABLE MATERIAL IS TO BE CARRIED OUT BY THE STUDENTS AS HOME ASSIGNMENT

References:

- 1) Civil engineering materials - T.T.T.I. Chandigarh.
- 2) Engineering materials - S.C.Rangwala.

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DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

DRAWING & PAINTING-1

1.0 RATIONALE :

Drawing and painting has its importance in introducing the student to free-hand drawing of object building, with the help of frequent site visit, they are able to express their ideas through real life free-hand sketches. Knowledge of colour schemes & compositions helps the student to instill life into their drawings/sketches. Drawing and Painting as a whole provides a strong platform to enable the student to develop creative ideas for their architectural design subject.

2.0 SCHEMES OF STUDIES :

SR NO	NAME OF COURSE	L	P
1	Drawing & Painting-1	--	6

3.0 SCHEME OF TEACHING:

TOPIC NO.	NAME OF TOPIC	NO. OF HOURS		
		LECT.	PRACT.	TOTAL
1	Sketch incorporating lines & shapes (5-sketches).	--	20	20
2	Sketches of Building objects & furniture (5-sketches)	--	18	18
3	Types of staircases (3-sketches).	--	16	16
4	Colour wheel.	--	10	10
5	Two dimensional composition of geometrical forms & finish with appropriate media.	--	20	20

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4.0 TRS & EO's

T.R.S

2.6 Draw sketches of buildings using different media.

EO's

2.6.1 Prepare sketches of existing objects.

2.6.2 Prepare sketches of objects from memory.

2.6.3 Prepare sketches of objects in different scale and proportion.

2.6.4 Prepare sketches of buildings showing shades, shadows and texture.

2.6.5 Prepare a colour composition.

2.6.6 Prepare two dimensional composition with different materials and finish it with different texture & colors.

2.6.7 Prepare three dimensional composition.

5.0 CONTENT OUTLINE:

Topic -1 LINE : Types of Lines and its expression through use(weightage)in drawing. DRG. WORK

Topic-2 SHAPE: Types of shapes like Natural geometrical,& FORM abstracts etc. Its use in building composition.

Topic-3 SCALE: Types of Scales, Scale and proportion in general.

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Topic-4 COLOUR: Colour wheel, colour schemes, visual and psychological effect of colour.

- TERM WORK:**
1. Sketches incorporating the lines and shapes,(Trees, human figures, vehicles, Five sketches each).
 2. Five sketches of building objects and furniture.
 3. Sketches of three types of staircases.
 4. Colour Wheel.
 5. Two dimensional composition of geometrical forms and finished with appropriate media.

6.0 INSTRUCTIONAL STRATEGIES & KEY RESOURCES:

Sr. No.	T.R.S	E.O.	Instructional Strategy	Key Resources
1	2.6	2.6.1	Site visit.	Materials Building
		2.6.2	Assignment in drawing Studio Ex. & Pr. feedback.	
		2.6.3	Assignment in drawing Studio Ex. & Pr. feedback.	
		2.6.4	Site visit.	
		2.6.5	Studio Ex. & Pr. feedback. Assignment in drawing.	
		2.6.6	Studio Ex. & Pr. feedback. Assignment in drawing.	
		2.6.7	Studio Ex. & Pr. feedback. Assignment in drawing.	

7.0 REFERENCES BOOKS:

- 1) Art in everyday life - Hamlet Goldstein. Vetta Goldstein.
- 2) Design through discovery - Marjorie Elliott Bevin

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DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP BUILDING DRAWING

1.0 RATIONALE:

This course introduces students to different building components and their measurements. This course helps the students to develop skills to draw plans, elevations and sections of both buildings and the furniture inside. It also helps students to develop a skill to draw using different scales. This course, in short prepares students for presentation drawings/working drawing etc. involved in architectural design subject.

2.0 SCHEMES OF STUDIES:

SR NO	NAME OF COURSE	L	P
1	Building Drawing	--	6

3.0 SCHEME OF TEACHING:

TOPIC NO.	NAME OF TOPIC	NO. OF HOURS		
		LECT.	PRACT.	TOTAL
1a)	Typical wall section from parapet to foundation which shows all levels and technical terms.	--	10	10
1b)	Typical column section from slab & beam to foundation which shows all levels & technical.	--	10	10
1c)	Plan, Elevation & Section of a single room e.g. watchman's cabin, Milk both etc.	--	10	10
2	Measured Drawing of small unit of public building e.g. Classroom, Library, Hall etc in 1:100 scale including plans, elevations & sections.	--	32	32
3	Plans, Elevations & Sections of a small residential building with at least one section, each form staircase and toilets, showing all dimensions in 1:50 scale.	--	22	22

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4.0 TRS & EO's

T.R.S

2.8. Trace building drawing using pencil & ink.

EO's

2.8.1 Manu plate various drafting instruments.

2.8.2 Use different drawing materials.

2.8.3 Fix the drawing sheet, tracing paper & prepare drawings sheets properly on drawing board.

2.8.4 Dimension, re-draw and alter the original drawing.

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T. R. S

2.9 Measure existing small building and prepare drawings

EO's

- 2.9.1 Prepare the sketch of the existing building.
- 2.9.2 Measure and enter all dimension of each component of the building properly
- 2.9.3 Proper the drawing to the proper scale.
- 2.9.4 Prepare the schedule for opening.
- 2.9.5 Draw the lay-out of existing furniture.

5.0 CONTENT OUTLINE

THEORY

Topic-1 IDENTIFICATION OF BUILDING COMPONENTS:

Identification of Building Components inclusive of all Technical Terms involved.

Topic-2 MEASUREMENT OF BUILDING COMPONENTS:

Explanation about how to take measurements of building components

Topic-3 INTRODUCTION OF PLAN, ELE. & SECTIONS:

Explanation about how to draw elevations, plans, sections, etc. Also methods of writing measurements (Dimensions).

Topic-4 MEASURED DRAWING -- 2 OR 3 ROOMS UNIT WITH EXISTING FURNITURE LAYOUT.

Measured Drawing of part of a building (e.g. A Public Building) with all existing components such as Staircase, Toilet Block Canopy, Entrance Door, Doors & Windows, Cabins, Rooms, etc. Plans, Elevations & Sections of a given residential building preferably single-storied complete with staircase and with a water-tank (overhead) and stair cabin.

Topic-5 ENLARGEMENT OF BUILDING COMPONENTS IN LARGE SCALE WITH NECESSARY DETAILS AND DIMENSIONS E.G. KITCHEN, STAIRCASE, DOORS & WINDOWS, TOILETS ETC.

TERM WORK:

1.
 - a) Typical wall section from parapet to foundation, which shows all levels and technical terms
 - b) Typical column section from slab & beam to foundation, which shows all levels & technical Terms.
 - c) Plan, Elevation & Section of a single room e.g. Watchman's Cabin, Milk Booth etc.
2. Measured Drawing of small unit of Public Building e.g. Class Room Library, Hall etc. in 1:100 scale including plans, elevations & Sections.
3. Plans, Elevations & Sections of a small residential building with at least one section each from staircase and Toilet/s, showing all dimensions in 1:50 scale.
4. Enlarged working detail drawings of Minimum two of the following:
 - a) Kitchen with platform
 - b) Staircase with cabin
 - c) Toilets
 - d) Doors & windows
 - e) Store room with stone shelves.

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6.0 REFERENCE BOOKS:-

1. BUILDING DRAWING: -- By Shah, Kale and Patki
2. BUILDING CONSTRUCTION -- By Mc Kay
3. BUILDING CONSTRUCTION -- By Barry.
4. BUILDING DRAWING -- By Y.S.Sane.
5. CIVIL ENGG. DRAWING -- By Mallik & Meo

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DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

MODEL MAKING

1.0 RATIONALE:

All architectural designs are presented with the help of drawings and model. Drawings like plans, sections & elevations help one to understand the design two-dimensionally while models provide a three dimensional effect. Hence knowledge and skill of making models with the help of different materials in different scales is very important for architectural presentation. This type of presentation is useful to common man/lay-man for understanding planning & designing of building

2.0 SCHEMES OF STUDIES:

SR NO	NAME OF COURSE	Pre. Req.	L	P
1	Model making	---	--	4

3.0 SCHEME OF TEACHING:

TOPIC NO.	NAME OF TOPIC	NO. OF HOURS		
		LECT.	PRACT.	TOTAL
1	One model of geometrical composition having 4 to 5 geometrical solids	--	14	14
2	One model of building components like staircase, water tank, balcony, porch entrance etc.	--	16	16
3	One model of small building showing landscape, parking etc.	--	26	26
				----- 56 -----

4.0 TRS & EO's

T.R.S

2.7. Prepare a model of building using different materials.

EO's

2.7.1 Cut and pasts various materials like cardboard, mount board, cork sheet, thermocol, and prepare given geometrical objects.

2.7.2 Prepare models of given building components.

2.7.3 Prepare a model of a small building.

2.7.4 Prepare the base for landscaping and placement of the building.

5.0 CONTENT OUTLINE

Topic -1

1.1 Use of different materials & tools used in Model Making such as handmade papers, card board, mount board, thermocol etc.

1.2 Exercise on cutting and pasting of these materials.

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- 1.3 Model of layout of buildings, Model of building components.
- 1.4 Techniques of landscaping, site details.

Topic -2 TERM WORK:

- 2.1 This shall consist of Models done as under:
 - 2.1.1 One model of geometrical composition having 4 to 5 geometrical solids.
 - 2.1.2 One model of building component like staircase, water tank, balcony, porch entrance etc.
 - 2.1.3 One model of small building showing landscape, parking etc.

6.0 INSTRUCTIONAL STRATEGIES & KEY RESOURCES:

Sr. No.	T.R.S	E.O.	Instructional Strategy	Key Resources
1	2.7	2.7.1	Studio Ex. & Pr. feedback.	Materials(i.e. thermocol, clay etc).
		2.7.2	Studio Ex. & Pr. feedback.	Materials(i.e. thermocol, clay etc)
		2.7.3	Studio Ex. & Pr. feedback.	Materials(i.e. thermocol, clay etc).
		2.7.4	Studio Ex. & Pr. feedback.	Materials(i.e. thermocol, clay etc).

7.0 Reference Books:

- 1) Architectural Models - Rolf Janke Thames & Hudson, London.
- 2) Architectural Drawing - Edward J. Muller Prentice Hall, Eaghwood Cities.
- 3) Architectural - Ernest Burden Delineation (Mc-Grew Hills Book Co).

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

ARCHITECTURAL DRAWING-I

1.0 RATIONALE:

Architectural drawing is a subject which imparts fundamental knowledge about using the drawing instruments which ultimately is useful for all subjects which are drawing oriented .It also gives idea of using various types of Architectural letters, Gothic letters and different types of lines, quality of lines. This skill can be developed and perfected by drawing various geometrical constructions, drawing signs and symbols used at various levels in drawing plans, elevations and sections of the building. Orthographic projection is a topic which clears terminology like plan, elevation, side elevation, drawing in first angle method and of projection by drawing plans, elevations and side elevations of plane, geometrical and complex objects. This skill ultimately can be utilized in drawing the building drawings.

- 1) Isometric & Axo.
- 2) Sciography.
- 3) Developing sketch.

2.0 SCHEMES OF STUDIES & EXAMINATIONS :

SR NO	NAME OF COURSE	L	P
1	Architectural Drawing-1	--	8

3.0 SCHEME OF TEACHING:

TOPIC NO.	NAME OF TOPIC	NO. OF HOURS		
		LECT.	PRACT.	TOTAL
1	Practice of drafting Techniques by different drafting instruments.	--	16	16
2	Gothic letters	--	16	16
3	Signs and symbols.	--	16	16
4	Geometrical construction	--	24	24
5	Orthographic projections	--	40	40
				----- 112

4.0 TRS & EO's

T.R.S

2.8. Trace building drawing using pencil & ink.

EO's

2.8.1 Manuplate various drafting instruments.

2.8.2 Use different drawing materials.

2.8.3 Fix the drawing sheet, tracing paper & prepare drawings sheets properly on drawing board.

T.R.

2.13 Draw the isometric, axonometric and perspective of the given building.

EO's

2.13.1 Write free hand & Gothic letters

2.13.2 Prepare drawings of the geometrical construction.

2.13.3 Prepare drawings related to orthographic projections.

2.13.4 Draw isometric views of the given object.

2.13.7 Prepare drawings of the projections of points, lines planes & solids.

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5.0 CONTENT OUTLINE

THEORY

Topic-1 PRACTICE OF DRAFTING TECHNIQUES BY DIFFERENT DRAFTING INSTRUMENTS:

- (A) Practice the use of Drawing Board, Tee-Squares, Compass (whole set), different grade of pencils, rubber, clips, sand paper, clutch pencils, scales, stencils, inking pens, circle templates ,French curves, templates, drafting machine etc.

Topic-2 GOTHIC LETTERS:

- (A) Study of Gothic letters with different proportions of letters 6 : 4.
(B) FREE HAND LETTERING: Lettering composition and styles of letters in free hand .

Topic-3 SIGNS & SYMBOLS:

Conventional graphical presentation of different building materials, doors and windows, electrical fittings, water supply & Sanitary fittings, furniture, vehicles, shrubs, trees, parking etc.

Topic-4 GEOMETRICAL CONSTRUCTION:

- (A) Draw a perpendicular to a given line with different conditions.
(B) Draw a line through a given point parallel to a given straight line.
(C) Divide a given straight line into any number of equal parts by various methods.
(D) Trisect the given right angle.
(E) Construction of different types of regular polygons given the length of a side.
(F) Inscribe circles in polygons with different conditions.
(G) Inscribe different regular polygons in a circle.
(H) Draw circles outside the polygon touching the sides.
(I) Construct an ellipse by concentric method, arcs of circles method, oblong method, loop & thread method.
(J) Construct a parabola given base and axis by rectangle and tangent method.
(K) Construct a cycloid on a straight line and circumference of the given generating circle.
(L) Draw an involute of a given circle and square.
(M) Construct an Archimedean Spiral of convolutions given the greatest and shortest radii.

Topic-5 ORTHOGRAPHIC PROJECTIONS:

- (A) Theory of projections such as object projectors, planes of projections (views), direction of vision.
(B) Given the position of the object in relation with reference line, identify the quadrant, in which the object is situated.
(C) Understand the projection of points, lines when placed in various positions with respect to H.P., V.P. & X.Y. Line
i) line parallel to both the planes
ii) perpendicular to one plane & parallel to other.
iii) parallel to one plane and inclined to other.
(D) Understand the projection of planes when placed in various position with respect to H.P., V.P. & X.Y. line.
i) parallel to one plane and perpendicular to other.
ii) perpendicular to one plane and inclined to other.
iii) perpendicular to both H.P. and V.P.
(E) Given a pictorial (isometric view) view draw the orthographic projections in first angle method only. Students must be aware of third angle method also.

TERM WORK:

- 1) Drafting techniques
- 2) Lettering
 - (a) One Gothic A size
 - (b) One Free hand lettering.
- 3) Signs & Symbols - 3 sheets A size.
- 4) Geometrical Construction -- 4 Sheets A size.
- 5) Orthographic projection –
 - (a) Point and line -- One sheet
 - (b) Planes -- One Sheet
 - (c) Orthographic views -- Two Sheets with minimum 4 problems in each along with isometric view.

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6.0 INSTRUCTIONAL STRATEGIES & KEY RESOURCES:

Sr. No.	T.R.S	E.O.	Instructional Strategy	Key Resources
1	2.8	2.8.1 2.8.2 2.8.3	Studio Ex. & Pr. feedback. Studio Ex. & Pr. feedback. Studio Ex. & Pr. feedback.	
2	2.13	2.8.4 2.13.1 2.13.2 2.13.3 2.13.4 2.13.5 2.13.6 2.13.7 2.13.8 2.13.9 2.13.10 2.13.11	Studio Ex. & Pr. feedback. Studio Ex. & Pr. feedback. Input cum discussion followed by practice feedback. Studio Ex. & Pr. feedback. Input cum discussion followed by practice feedback. Studio Ex. & Pr. feedback. Input cum discussion followed by practice feedback Studio Ex. & Pr. feedback. Input cum discussion followed by practice feedback. Studio Ex. & Pr. feedback. Input cum discussion followed by practice feedback Studio Ex. & Pr. feedback Studio Ex. & Pr. feedback Studio Ex. & Pr. feedback Studio Ex. & Pr. feedback Studio Ex. & Pr. feedback. Input cum discussion followed by practice feedback	

References :

- 1) Architectural drafting and design - Helper and Vallach.
- 2) Architectural Abbreviations Dictionary
- 3) Elementary Engineering Drawing - N.D.Bhatt
- 4) Architectural Drawing - Harvey W. Waffle
- 5) Astrology in House Building.