



BANGLADESH TECHNICAL EDUCATION BOARD
Agargaon, Sher-E-Bangla Nagar
Dhaka-1207.

4-YEAR DIPLOMA IN ENGINEERING CURRICULUM
COURSE STRUCTURE & SYLLABUS
(PROBIDHAN-2022)

ARCHITECTURE TECHNOLOGY
TECHNOLOGY CODE: (61)

2nd SEMESTER
(Effective from 2022-2023 Academic Sessions)

DIPLOMA IN ENGINEERING CURRICULUM COURSE STRUCTURE

(PROBIDHAN-2022)

TECHNOLOGY NAME: ARCHITECTURE TECHNOLOGY (61)

(2nd SEMESTER)

Sl	Subject		Period		Credit	Marks Distribution						
						Theory Assessment			Practical Assessment			Grand Total
	Code	Name	Theory	Practical		Continuous	Final	Total	Continuous	Final	Total	
1	25721	Bangla -II	2	-	2	40	60	100	-	-	-	100
2	25722	English-II	2	-	2	40	60	100	-	-	-	100
3	25912	Physics -I	3	3	4	60	90	150	25	25	50	200
4	25921	Mathematics-II	3	3	4	60	90	150	25	25	50	200
5	26121	Architectural Design-I	2	6	4	40	60	100	50	50	100	200
6	26411	Civil Engineering Materials	2	3	3	40	60	100	25	25	50	150
7	28511	Computer Office Application	-	6	2	-	-	-	50	50	100	100
Total			14	21	21	280	420	700	175	175	350	1,050

Subject Code	Subject Name	Period/Week		Credit
26121	ARCHITECTURAL DESIGN-1	T	P	C
		2	6	4

Rationale	The subject will enable the diploma Architects students to improve architectural design education allows the student to gain different perspectives by enhancing his imagination and accumulation of knowledge. Concept and mind maps that are some of these methods guide students to think and explore. The student to establish an analysis–synthesis–evaluation relationship and improve his intellectual and visual perception abilities.
Learning Outcome (Theoretical)	After undergoing the subject, students will be able to: ▪ Understand Architectural terminology. ▪ Familiar with Building components. ▪ Explain Plan, Elevation, Section. ▪ Explain Different circulations. ▪ Describe Design principals.
Learning Outcome (Practical)	After undergoing the subject, students will be able to: ▪ Draw Architectural Drawing. ▪ Draw Plan, Elevation, Section. ▪ Draw detail drawings. ▪ Design single room house. ▪ Draw Building component. ▪ Draw and Differentiate the Similar terms of building.

Detailed Syllabus (Theory)

Unit	Topics with Contents	Class (1 Period)	Final Marks
1	ARCHITECTURAL TERMINOLOGY 1.1. State Plan, Elevation, Section. 1.2. Describe Single line and Double line diagram. 1.3. List the name of different drawing. 1.4. Explain Presentation drawing. 1.5. Explain Working drawing. 1.6. Explain Detail drawing. 1.7. Explain Shop and As-built drawing. 1.8. Describe Site.	4	8

2	DIFFERENT BUILDING COMPONENTS 2.1 Define Ground Level (G.L.), Plinth Level (P.L.) 2.2 Define the different Structural Terms: Sub structure, Super structure, Foundation, Footing, Column, Beam and Wall. Floor, Ceiling, False slab, False ceiling, Loft. Sill, Window sill, Lintel, Sunshade, Drip course. Roof, LC, Parapet, Cornice, Coping. Railing, Hand rail, Skirting, Dado. 2.3 Define the different building components: Opening, Door, Window. Ventilator, Sun Light (S.L.), Sky Light. Porch, Portico. Duct, Garbage duct, Air-well, Light-well. Penthouse, Tiles, Mosaic, Terrazzo, Offset, Punch, Groove line, pergola, verandah, balcony, terrace, corbel, louver, projection wall, vault, dome.	10	20
3	PLAN 3.1 Define Plan. 3.2 Describe the necessity of plan. 3.3 List the name of different Floor Plan: Ground Floor Plan, Typical Floor Plan, Basement Floor Plan, Semi Basement Floor Plan, Mezzanine Floor Plan, 3.4 Describe the different Roof plan -Flat roof, Slope/ Pitched roof, Curved roof. 3.5 State Lay-out Plan, Trench Plan, Site Plan, Master Plan.	6	12
4	ELEVATION 4.1 Define Elevation. 4.2 State the necessity of elevation. 4.3 Explain different Side (North, South, East, West) Elevation. 4.4 Explain Angular elevation. 4.5 Explain Special Type of elevation.	2	4
5	SECTION 5.1 Define Section. 5.2 State the necessity of section. 5.3 Explain different section (longitudinal/long, cross section). 5.4 Explain transverse section (section) 5.5 Explain partial section (part section) 5.6 Explain sectional elevation. 5.7 Explain floor height and room height.	4	8
6	DESIGN PRINCIPALS IN ARCHITECTURE 6.1 Define Art and Architecture. 6.2 Define design. 6.3 Describe necessity of design in Architecture. 6.4 Describe design principles in Architecture. 6.5 Define formal and informal design. 6.6 Define creative and technical design.	2	4
7	DIFFERENT TYPES OF CIRCULATION 7.1 List the types of circulation. 7.2 Vertical circulations (stair, escalator, ramp, elevator)	2	4

	7.3 Horizontal circulations (passage, corridor, lobby, foyer, lanais, deck, courtyard.)		
	Total	30	60

Detailed Syllabus (Practical)

Sl.	Experiment name with procedure	Class (3 Period)	Continuou s marks
1	PERFORM ARCHITECTURAL DRAWING. 1.1 Draw a single room plan by single line. 1.2 Draw a single room plan by double line showing door and Window. 1.3 Prepare a presentation drawing of the room. 1.4 Prepare a working drawing of the room with dimensions. 1.5 Draw four sides elevation of the room. 1.6 Draw a long section of the room with symbol and dimension. 1.7 Draw a cross section of the room with symbol and dimension.	4	7
2	DRAWING OF PLAN 2.1 Copy a Ground floor plan of a given small residential building. 2.2 Draw a Typical floor plan of the given building with dimensions. 2.3 Draw a Presentation plan of the building. 2.4 Draw a Roof plan of the building with dimensions.	6	10
3	DRAWING OF ELEVATION 3.1 Draw North elevation of the building. 3.2 Draw South elevation of the building. 3.3 Draw East elevation of the building. 3.4 Draw West elevation of the building. 3.5 Draw an elevation of any angular surface. 3.6 Draw an elevation of any curved surface.	4	5
4	DRAWING OF SECTION 4.1 Draw a longitudinal section of the building with detail Dimensions. 4.2 Draw a transverse section of the building with detail dimensions. 4.3 Draw a partial section of the building with detail dimensions. 4.4 Draw a sectional elevation of the building with detail dimensions.	6	10
5	DRAWING OF BUILDING COMPONENT. 5.1 Draw the sectional view of G.L. and P.L showing steps. 5.2 Draw the sectional view of parapet showing roof, cornice, coping. 5.3 Draw the sectional view of lintel with sunshade showing drip course. 5.4 Make a section of a false slab. 5.5 Draw a plan and elevation of a wall showing punch and offset.	4	8
6	DRAW AND DIFFERENTIATE THE SIMILAR TERMS OF BUILDING. 6.1 Draw a passage and a corridor from a given plan showing the difference between them. 6.2 Draw a lobby and a foyer from a given plan showing the	6	10

	difference between them. 6.3 Draw a lanai and a deck from a given plan showing the difference between them. 6.4 Draw a courtyard and a light well from a given plan showing the difference between them. 6.5 Draw verandah, balcony and terrace from a given plan showing the difference between them. 6.6 Draw a projection wall and a louver from a given plan showing the difference between them.		
	Total	30	50

Necessary Resources (Tools, equipment's and Machinery):

Sl.	Item Name	Quantity
01	Drawing sheet (Size A2)	6 Reams
02	Drafting Table/Board with Parallel bar	48 Nos
03	Set-Square	48 Set
04	Triangular Scale	48 Nos
05	Color Pencil	12 Dozens
06	Wooden Pencil (HB, B, 2B)	15 Dozens (5 dozens per grade)
07	Mechanical Sharpener	6 Nos
08	Eraser (soft)	4 Dozens
09	Paper Tape (3/4")	4 Dozens
10	Cloth Duster (18"x24")	48 pcs
11	Mechanical Lead Holder (0.5mm)	48 Nos
12	Lead (0.5mm-2B)	100 boxes (12 lead per box)

Recommended Books:

Sl	Book Name	Writer Name
01	Architecture Form, Space and Order	Francis D.K. Ching
02	Basic Architectural Design	Bert Bielefeld
03	The Language of Architecture	Andrea Smitich, Val Warke
04	Rethinking Basic Design in Architectural Education	Mine Ozkar
05	Basic Design Principals of Architectural	Parker, Leonard
06	Design Drawing	Francis D.K. Ching
07	Drafting & Design For Architecture & Construction	Donald E. Hepler, Dana J. Wallach, Paul Ross.

Website References:

Sl	Web Link	Remarks
01	https://www.oreilly.com/library/view/web-20-architectures	
02	https://subjectguides.uwaterloo.ca/architecture/reference	
03	https://www.britannica.com/topic/architectureposition.php#page-001	
04	https://pdfcoffee.com/how-t https://en.wikipedia.org/wiki/Architecture	

