



**Government of Karnataka  
Department of Technical Education**

# **C-25 Diploma in Architecture Assistantship.**

## **Scheme of Studies**

**(Effect from the AY 2025-26)**



Government of Karnataka  
DEPARTMENT OF TECHNICAL EDUCATION

## Curriculum Structure

### I Semester Scheme of Studies – Architecture Assistantship

Sl. No.	Teaching Department	Course Code	Course Name	Hours per week			Total Contact Hours/week	Credits	CIE Marks		Theory SEE Marks		Practice SEE Marks		Total Marks
				L	T	P			Max	Min	Max	Min	Max	Min	
<b>Integrated Courses</b>															
1	SC	25SC11I	Engineering Mathematics-I	4	0	4	8	6	50	20	50	20	-	-	100
2	ENG	25EG01I	Essential English Communication	4	0	4	8	6	50	20	-	-	50	20	100
3	EE	25EE01I	Fundamentals of Electrical & Electronics Engineering.	3	0	4	7	5	50	20	-	-	50	20	100
4	AR	25AR11I	Introduction to Architecture	4	0	4	8	6	50	20	50	20	-	-	100
<b>Audit Course</b>															
5	AR	25AR12T	Environmental Sustainability	2	0	0	2	2	50	20	-	-	-	-	50
6	Personality Development		NCC/NSS/YOGA/SPORTS...	Students are expected to engage in any one of these activities from 1 <sup>st</sup> semester to 6 <sup>th</sup> semester (No Credits)											
<b>Total</b>				<b>17</b>	<b>0</b>	<b>16</b>	<b>33</b>	<b>25</b>	<b>250</b>	<b>-</b>	<b>100</b>	<b>-</b>	<b>100</b>	<b>-</b>	<b>450</b>



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## Curriculum Structure

### II Semester Scheme of Studies - Architecture Assistantship

Sl. No.	Teaching Department	Course Code	Course Name	Hours per week			Total Contact Hours/week	Credits	CIE Marks		Theory SEE Marks		Practice SEE Marks		Total Marks
				L	T	P			Max	Min	Max	Min	Max	Min	
<b>Integrated Courses</b>															
1	SC	25SC21I	Engineering Mathematics-II	4	0	4	8	6	50	20	50	20	-	-	100
2	AR	25AR21I	Building Construction and Materials- I	4	0	4	8	6	50	20	50	20	-	-	100
3	AR	25AR22I	Architectural Graphics	3	0	4	7	5	50	20	-	-	50	20	100
4	CS	25CS01I	IT Skills	3	0	4	7	5	50	20	-	-	50	20	100
<b>Audit Course</b>															
5	AR	25AR23T	Indian Constitution	2	0	0	2	2	50	20	-	-	-	-	50
6	Personality Development		NCC/NSS/YOGA/SPORTS...	Students are expected to engage in any one of these activities from 1 <sup>st</sup> semester to 6 <sup>th</sup> semester (No Credits)											
<b>Total</b>				<b>16</b>	<b>0</b>	<b>16</b>	<b>32</b>	<b>24</b>	<b>250</b>	<b>-</b>	<b>100</b>	<b>-</b>	<b>100</b>	<b>-</b>	<b>450</b>



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**DEPARTMENT OF TECHNICAL EDUCATION**

<b>Program</b>	<b>Architecture Assistantship</b>	<b>Semester</b>	<b>I</b>
<b>Course Name</b>	<b>Introduction to Architecture</b>	<b>Type of Course</b>	<b>Integrated</b>
<b>Course Code</b>	<b>25AR11I</b>	<b>Contact Hours</b>	<b>0 8Hours / week 104 Hours / semester</b>
<b>Teaching Scheme</b>	<b>L:T:P      4:0:4</b>	<b>Credits</b>	<b>6</b>
<b>CIE Marks</b>	<b>50</b>	<b>SEE Marks</b>	<b>50 (Theory)</b>

### 1. Rationale:

Architecture influences our society and culture; the history of architecture bridges the gap between the past eras and the present day. Since the beginning of time, each civilization of different eras formed its unique style based on its religious beliefs, philosophies and social needs.

### 2. Course Outcomes: At the end of the Course, the student will be able to:

<b>CO-01</b>	Analyze the history and evolution of architecture
<b>CO-02</b>	Identify the features of Jain and Buddhist Architecture.
<b>CO-03</b>	Identify and illustrate the architectural characteristics of Hindu and Indo Islamic Architecture.
<b>CO-04</b>	Identify and illustrate the architectural characteristics of Egyptian, Greek and Roman Architecture

### 3. Course Content

<b>WEEK</b>	<b>CO</b>	<b>PO</b>	<b>Theory</b>	<b>Practice</b>
<b>1</b>	<b>01</b>	<b>1,4,5</b>	Introduction to Architecture, evolution of Architecture in pre historic period, Factors influencing development of Architecture: - Geological, Geographical, Climate, Historic, Social religious and Economic.	Prepare a sheet on development of architecture in pre historic stage.
<b>2</b>	<b>02</b>	<b>1,4,5</b>	Architectural characteristics of Jain Architecture. Example-Adinath temple at Ranakpur.	Prepare a sheet on Adinath Temple at Ranakpur highlighting the characteristics.
<b>3</b>	<b>02</b>	<b>1,4,5</b>	Architectural characteristics of Buddhist Architecture. Examples : Stupa at Sanchi, Chaitya hall in Karli.	Prepare a sheet on stupa at Sanchi, Chaitya hall in Karli.

4	03	1,3,4,5	Architectural characteristics of central Hindu Style focusing on Chalukyan architecture. Example of Durga temple at Aihole , Virupaksha temple at Pattadkal.	Prepare a sheet on characteristics of Chalukyan Architecture & Durga temple at Aihole , Virupaksha temple at Pattadkal.
5	03	1,3,4,5	Characteristics of Dravidian style focusing on Pallava & Chola architecture. Example : Shore temple at Mahabalipuram and Brihadeshwara temple at Tanjore.	Prepare a sheet on Shore temple at Mahabalipuram and Brihadeeshwara temple at Tanjore.
6	03	1,3,4,5	Characteristics of Northern Hindu architecture. Example- Lingaraja Temple at Bhubaneswar	Prepare a sheet on Lingaraja Temple at Bhubaneswar.
7	03	1,3,4,5	Introduction to Indo Islamic architecture, characteristic features of indo Islamic architecture.	Prepare a sheet on characteristics of indo Islamic architecture
8	03	1,3,4,5	Jama Masjid at Delhi and Gol Gumbaz at Bijapur	Sheet on Jama masjid at Delhi.
9	03	1,3,4,5	Taj Mahal at Agra	Sheet on Taj Mahal at Agra
10	04	1,3,4,5	Characteristics of Egyptian Architecture. Example – Pyramid of Cheops at Giza, Temple of khons at Karnak.	Prepare sheets on Pyramid of Cheops at Giza, Temple of khons at Karnak.
11	04	1,3,4,5	Characteristics of Greek Architecture. Example - Classical Orders, Parthenon temple at Athens.	Prepare sheets on Classical Orders, Parthenon temple at Athens.
12	04	1,3,4,5	Characteristics of Roman Architecture. Example – Orders and Pantheon temple.	Prepare sheets on Orders, and Pantheon temple
13	04	1,3,4,5	Characteristics of Colosseum at Rome.	Prepare sheets on Characteristics of Roman Colosseum.

#### 4. References:

1. A history of Architecture - Bannister Fletcher.
2. World Architecture - Hiraskar.
3. Indian Architecture volume I and II –Percy Brown

## 5. CIE Assessment Methodologies

Sl. No	CIE Assessment	Test Week	Duration (minutes)	Max marks	Average of all CIE=50 Marks
1.	CIE-1TheoryTest	4	90	50	
2.	CIE-2Practice Test	7	180	50	
3	CIE-3TheoryTest	10	90	50	
4.	CIE-4Practice Test	13	180	50	
5	CIE-5 Portfolio evaluation of all the activities through Rubrics	1-13		50	
<b>Total</b>					<b>50 Marks</b>

## 6. SEE - Theory Assessment Methodologies

Sl. No	SEE - Theory Assessment	Duration	Exam Paper Max marks	Exam Paper Max Marks scale down to (Conversion)	Min marks to pass
1.	Semester End Examination-Theory	3 Hours	100	50	20

## 7. CIE Theory Test model question paper

Program		Architecture Assistantship			Semester - I	
Course Name		Introduction to Architecture			Test	I/III
Course Code		25AR11I	Duration	90 min	Marks	50
<b>Name of the Course Coordinator:</b>						
<b>Note:</b> Answer any one full question from each section. Each full question carries equal marks.						
Q.No	Questions			Cognitive Level	Course Outcome	Marks
<b>Section - 1</b>						
1	a) Define Architecture. b) Sketch any three dwelling units used in pre historic period. c) Identify different stages of architecture evolution.			R U A	01	05 10 10
2	a) List the factors which influences the development of architecture. b) State the importance of architecture c) sketch any two types of huts used in pre historic period.			R U A	01	05 10 10
<b>Section - 2</b>						

3	a) List the important features of Jain Architecture. b) Sketch Adinath temple at Ranakpur and label its parts. c) Explain the features of Buddhist Vihara.	U A A	02	05 10 10
4	a) Highlight the architectural features of Adinath Temple at Ranakpur. b) Explain the features of Buddhist Chaithya hall. c) Sketch and explain the features of Sanchi Stupa.	U A A	02	05 10 10
Note for the Course coordinator: Each question may have one, two or three subdivisions. Optional questions in each section carry the same weightage of marks, cognitive level and course outcomes.				

**Signature of the  
Course Coordinator**

**Signature of the HOD**

**Signature of the IQAC Chairman**

### 8. CIE Practice Test model question paper

<b>Program</b>	<b>Architecture Assistantship</b>			<b>Semester</b>	<b>I</b>
<b>Course Name</b>	<b>Introduction to Architecture</b>			<b>Test</b>	<b>II/IV</b>
<b>Course Code</b>	<b>25AR11I</b>	<b>Duration</b>	<b>180 min</b>	<b>Marks</b>	<b>50</b>
<b>Name of the Course Coordinator:</b>					
<b>Questions</b>				<b>CO</b>	<b>Marks</b>
1. Sketch any 2 dwelling units of pre historic period.				<b>1 &amp; 2</b>	<b>10</b>
2. Prepare plan and elevation of Adhinatha Temple at Ranakpur.					<b>20</b>
3. Prepare plan and elevation of Great stupa at sanchi.					<b>20</b>
<b>Scheme of assessment</b>					
1) Sketch - 08 & Labelling - 02					
2) Plan - 07, Elevation - 08 & Labelling - 05					
3) Plan - 05, Elevation - 10 & Labelling - 05					
<b>Total Marks</b>					<b>50</b>

**Signature of the Course Coordinator**

**Signature of the HOD**

### 9. Suggestive Activities for Tutorials:

The List is an Example and not inclusive of all possible activities of the course. Student and Faculty are encouraged to choose activities that are relevant to the topic

<b>Sl.No.</b>	<b>Suggestive Activities for Tutorials</b>
01	Graded exercises mentioned in Practice hours.
02	Study tour and documentation of the same.
03	Virtual Tour on historical buildings.

### 10. Rubrics for Assessment of Activity (Qualitative Assessment)

Sl. No.	Dimension	Beginner	Intermediate	Good	Advanced	Expert	Students Score
		2	4	6	8	10	
1		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	8
2		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	6
3		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	2
4		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	2
Average Marks=(8+6+2+2)/4=4.5							5

**Note:** Dimension and Descriptor shall be defined by the respective course coordinator as per the activities

### 11. Equipment/software list with Specification for a batch of 30 students

Sl.No.	Particulars	Specification	Quantity
01	Drawing table	As per Standards	30
02	LCD Projector	As per Standards	01
03	UPS	As per Standards	01



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<b>Program</b>	<b>Architecture Assistantship</b>	<b>Semester</b>	<b>II</b>
<b>Course Name</b>	<b>Building Construction and Materials - I</b>	<b>Type of Course</b>	<b>Integrated</b>
<b>Course Code</b>	<b>25AR21I</b>	<b>Contact Hours</b>	<b>8 Hours / week 104 Hours / Semester</b>
<b>Teaching Scheme</b>	<b>L:T:P 4:0:4</b>	<b>Credits</b>	<b>6</b>
<b>CIE Marks</b>	<b>50</b>	<b>SEE Marks</b>	<b>50 (Theory)</b>

### 1. Rationale:

The study of Building Construction and Material is essential to understand and apply the knowledge of building materials and their behavior under varied climatic conditions. The choice of materials & construction methods is crucial to select & ensure the structural integrity longevity, safety, Strength, durability, energy efficiency, aesthetic, cost and overall quality of the construction.

### 2. Course Outcomes: At the end of the Course, the student will be able to:

<b>CO-01</b>	Analyze types of stones used in building construction.
<b>CO-02</b>	Identify brick as a construction material and its applications.
<b>CO-03</b>	Recognize Characteristics and applications of cement concrete in construction.
<b>CO-04</b>	Identify various types of timber, their properties and uses in building construction.

### 3. Course Content:

<b>WEEK</b>	<b>CO</b>	<b>PO</b>	<b>Theory</b>	<b>Practice</b>
<b>1</b>	1	1,3	Introduction to Building Construction and Building Materials <b>STONES:</b> <ul style="list-style-type: none"><li>• Engineering aspects of stones</li><li>• Uses of stones as an engineering material</li><li>• Qualities of good building stone</li></ul>	Prepare drawings of Coursed and Uncoursed Rubble Masonry.
<b>2</b>	1	1,3,7	<ul style="list-style-type: none"><li>• Classification of stones:</li></ul>	Prepare drawings of Ashlar

			<p>Geological,</p> <ul style="list-style-type: none"> <li>• Physical and Chemical.</li> <li>• Types of Classification of stone masonry.</li> </ul>	Masonry.
3	1	1,7	<ul style="list-style-type: none"> <li>• Properties and uses of important types of stones.</li> <li>• Artificial stones their advantage &amp; types</li> </ul>	Collect samples of various stones and prepare a report.
4	2	1,7	<p>BRICKS:</p> <ul style="list-style-type: none"> <li>• Engineering aspects of bricks.</li> <li>• Raw materials for manufacturing bricks</li> <li>• Requirements of good bricks.</li> <li>• Classification of bricks based on shape and uses of bricks</li> <li>• Classification of bricks based on manufacturing process</li> </ul>	Prepare Plan, Elevation and Isometric view of Stretcher bond, Header bond and Brick Bats.
5	2	1,3,5,7	<p>Fly ash bricks, stabilized soil blocks.</p> <ul style="list-style-type: none"> <li>• Clay products – Ceramic, Glazed, Roofing tiles.</li> <li>• Types of brick bonds</li> </ul> <p>Comparison of stone and brick masonry.</p>	Prepare Plan, Elevation and Isometric view of English bond, Flemish bond and Rat-trap Bond.
6	2	1,3,5,7	<ul style="list-style-type: none"> <li>• Definition and necessity of arches.</li> <li>• Classification of arches.</li> <li>• Lintel and its types.</li> </ul>	Prepare a section through wall showing all Building Components from foundation to parapet wall
7	3	1,7	<p>CEMENT</p> <ul style="list-style-type: none"> <li>• Composition of cement.</li> <li>• Hydration of cement.</li> <li>• Setting of cement.</li> <li>• Water cement ratio.</li> </ul>	Types of foundation. Prepare drawings of Spread footing for load bearing and partition walls.
8	3	1,3,7	<p>AGGREGATES</p> <ul style="list-style-type: none"> <li>• Fine and course aggregate.</li> <li>• Source, functions, properties and uses of course and fine aggregates.</li> <li>• Types of column footing</li> <li>• RCC uses and its Advantages.</li> </ul>	Prepare a plan and section of Isolated RCC column footing.
9	3	1,3,7	<p>MORTAR AND CEMENT CONCRETE</p> <ul style="list-style-type: none"> <li>• Composition, Properties and uses.</li> <li>• Types of Mortar.</li> </ul>	Prepare drawings of RCC Lintel and beams.

			<ul style="list-style-type: none"> <li>• Grades of concrete.</li> <li>• Hollow concrete blocks and solid concrete blocks.</li> </ul>	
<b>10</b>	4	1,3,7	<b>TIMBER</b> <ul style="list-style-type: none"> <li>• Definition and uses</li> <li>• Classification of trees (Hard wood and soft wood) and sketch of a cross section of an exogenous tree.</li> <li>• Seasoning of timber.</li> <li>• Defects in timber.</li> </ul>	Prepare plan, elevation and section of fully paneled door.
<b>11</b>	4	1,3,7	Market forms of timber <ul style="list-style-type: none"> <li>• Doors: Function and location of doors.</li> <li>• Classification of doors based on arrangements of components: Battened door, Braced door and Framed door.</li> </ul>	Prepare a Sheet on types of doors
<b>12</b>	4	1,3,7	<b>Windows:</b> <ul style="list-style-type: none"> <li>• Function and Location of windows</li> <li>• Types of windows: Casement window, corner window and bay window.</li> </ul>	Prepare plan, elevation and section of Casement window, Corner window and Bay window.
<b>13</b>	4	1,5,7	<b>Industrial timber:</b> <ul style="list-style-type: none"> <li>• Properties and uses of plywood block board and particleboard.</li> <li>• Properties and uses of fiber boards, laminate and veneers</li> <li>• Ventilator: Definition and purpose of ventilator</li> </ul>	Prepare a report on market survey of industrial timber.

#### 4. References:

1. Building construction by S.C.Rangwala
2. Building construction by Sushil kumar
3. Building construction by S.S. Bhavikatti
4. Building construction and drawing by W.B.Mckay
6. Building construction by S.P.Arora and S.P.Bindra
7. Engineering Materials by S.C.Rangwala
8. <https://theconstructor.org/>

## 5. CIE Assessment Methodologies

Sl. No	CIE Assessment	Test Week	Duration (minutes)	Max marks	Average of all CIE=50 Marks
1.	CIE-1TheoryTest	4	90	50	
2.	CIE-2Practice Test	7	180	50	
3	CIE-3TheoryTest	10	90	50	
4.	CIE-4Practice Test	13	180	50	
5	CIE-5 Portfolio evaluation of all the activities through Rubrics	1-13		50	
<b>Total</b>					<b>50 Marks</b>

## 6. SEE - Theory Assessment Methodologies

Sl. No	SEE - Theory Assessment	Duration	Exam Paper Max marks	Exam Paper Max Marks scale down to (Conversion)	Min marks to pass
1.	Semester End Examination-Theory	3 Hours	100	50	20

## 7. CIE Theory Test model question paper

Program	Architecture Assistantship			Semester - II		
Course Name	Building Construction and Materials - I			Test	I/III	
Course Code	25AR21I	Duration	90 min	Marks	50	
<b>Name of the Course Coordinator:</b>						
<b>Note:</b> Answer any one full question from each section. Each full question carries equal marks.						
Q.No	Questions			Cognitive Level	Course Outcome	Marks
<b>Section - 1</b>						

1	a) State engineering aspects of stones b) Explain the geological classification of rocks c) Classify stone masonry in detail	R U U	1	5 10 10
2	a) State classification of rocks b) Outline uses of stones as an engineering material c) Explain properties and uses of Marble and Granite	R U U	1	5 10 10
<b>Section - 2</b>				
3	a) State engineering aspects of bricks b) Explain requirements of good bricks c) Sketch various shapes of bricks and explain their uses.	R U AP	2	5 10 10
4	a) Explain raw materials for manufacturing bricks b) Classification of bricks based on manufacturing process c) Sketch Plan and Elevation of Stretcher bond and Header bond	R U AP	2	5 10 10
Note for the Course coordinator: Each question may have one, two or three subdivisions. Optional questions in each section carry the same weightage of marks, cognitive level and course outcomes.				

**Signature of the  
Course Coordinator**

**Signature of the HOD**

**Signature of the IQAC Chairman**

### 8. CIE Practice Test model question paper

<b>Program</b>	<b>Architecture Assistantship</b>			<b>Semester</b>	<b>II</b>
<b>Course Name</b>	<b>Building Construction and Materials - I</b>			<b>Test</b>	<b>II/IV</b>
<b>Course Code</b>	<b>25AR21I</b>	<b>Duration</b>	<b>180 min</b>	<b>Marks</b>	<b>50</b>
<b>Name of the Course Coordinator:</b>					
<b>Questions</b>				<b>CO</b>	<b>Marks</b>
1. Prepare drawings of coursed Rubble Masonry. Draw the following a) Plan b) Elevation				<b>1</b>	<b>25</b>
2. Draw Flemish bond for one brick thick wall to a scale of 1:10. Assume necessary data. Draw the following a) Plan of odd and even course b) Elevation c) Isometric view				<b>2</b>	<b>25</b>
1.Scheme of assessment a)Plan + b)Elevation					<b>10+15</b>
2.Scheme of assessment					

a)Plan of odd and even course+ b)Elevation + c)Isometric view	<b>10+10+5</b>
<b>Total Marks</b>	<b>50</b>

**Signature of the Course Coordinator**

**Signature of the HOD**

### 9. Suggestive Activities for Tutorials:

The List is an Example and not inclusive of all possible activities of the course. Student and Faculty are encouraged to choose activities that are relevant to the topic

Sl.No.	Suggestive Activities for Tutorials
01	Graded exercises mentioned in the practice session.
02	Representation of the market survey done.
03	Site visit and preparing its report.

### 10. Rubrics for Assessment of Activity(Qualitative Assessment)

Sl. No.	Dimension	Beginner	Intermediate	Good	Advanced	Expert	Students Score
		2	4	6	8	10	
1		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	8
2		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	6
3		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	2
4		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	2
Average Marks=(8+6+2+2)/4=4.5							5

**Note:** Dimension and Descriptor shall be defined by the respective course coordinator as per the activities

### 11. Equipment/software list with Specification for a batch of 30 students

Sl.No.	Particulars	Specification	Quantity
01	Drawing table	As per Standards	30
02	LCD Projector	As per Standards	01
03	UPS	As per Standards	01



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<b>Program</b>	<b>Architecture Assistantship</b>	<b>Semester</b>	<b>II</b>
<b>Course Name</b>	<b>Architectural Graphics</b>	<b>Type of Course</b>	<b>Integrated</b>
<b>Course Code</b>	<b>25AR22I</b>	<b>Contact Hours</b>	<b>07 Hours/ week 91 Hours / semester</b>
<b>Teaching Scheme</b>	<b>L: T:P 3:0:4</b>	<b>Credits</b>	<b>05</b>
<b>CIE Marks</b>	<b>50</b>	<b>SEE Marks</b>	<b>50 (Practice)</b>

**1.Rationale:**

Architectural Graphics is effective language of architects to communicate imagination, information into graphical form. It is the foundation course that develops skill to accurately represent and identify various objects or geometry. The depth in graphics will improve visualizing capacity and the knowledge of projections, used to describe the design of any splendid structure. In addition, it is the tool of transmitting link between ideas and realization.

**2.Course Outcomes:** At the end of the Course, the student will be able to:

<b>CO-01</b>	Identify and demonstrate standards in architectural presentation, dimensioning and to reproduce given drawings to given scale.
<b>CO-02</b>	Visualize solid objects in all planes and to develop two dimensional views using principles of orthographic projection for graphical communication in design process.
<b>CO-03</b>	Draw unfold figures for 3D objects and Develop axonometric projections of solid objects.
<b>CO-04</b>	Develop perspective views for various geometrical forms and objects.

**3.Course Content**

<b>WEEK</b>	<b>CO</b>	<b>PO</b>	<b>Theory</b>	<b>Practice</b>
1	1	1,2,7	Introduction, List the different drawing instruments and its application. Graphical conventions of various types of lines and its application (Thick, Thin, Axis etc.)	Prepare a sheet to represent types of lines used in architectural presentation, sizes of sheets and instruments used for hand drafting. Prepare a sheet to practice line drawing using angular instruments (line drawing practice of horizontal, vertical, 450 angle, 600 angle, 300 angle etc.)
2	1	1,2,7	Definition, construction of polygons and representation of objects to different scales. Illustrate methods of drafting using all instruments.	Prepare a sheet to illustrate construction of triangles, polygons and division of angle and division of line without using angular measurements.

			Representative fraction Scales - Full Scale, Reduced Scale and Enlarged Scale.	Prepare a sheet to represent geometrical forms to various scales.
3	1	1,2,7	Dimensioning methods. - Aligned system and unidirectional system. Dimensioning Aligned system and unidirectional system in the given drawings.	Prepare a sheet illustrated with forms showing dimensioning systems to accurately measure its size, shape, location. Include types of lines, Arrows, extension line, diameter symbol, Radius symbol etc.
4	2	1,2,7	Concept of quadrant, first angle projections, third angle projection and their representation. Projections of solids in various positions with respect to the Reference planes.	Draw orthographic views of various geometrical planes (development of - Front view/Elevation, Top view/Plan and Side views using First Angle Method only)
5	2	1,2,7	Demonstrate methods to solve problems on orthographic projection of solids to accurately represent projections with correct nomenclature, line weights etc.	Draw orthographic views of cube, cuboid and prism (development of - Front view/Elevation, Top view/Plan and Side views using First Angle Method only)
6	2	1,2,7	Demonstrate methods to solve problems on orthographic projection of solids to accurately represent projections with correct nomenclature, line weights etc.	Draw orthographic views of pyramid, cone and cylinder (development of - Front view/Elevation, Top view/Plan and Side views using First Angle Method only) Draw orthographic projection for various objects
7	3	1,2,7	Introduction to development of surfaces and methods of development of surfaces.	Draw a sheet to show unfold/unrolled figures (development of surfaces) of solids like cube, prism and pyramid.
8	3	1,2,7	Demonstrate methods of developing scaled models using appropriate materials.	Prepare models of objects using development of surfaces method.
9	3	1,2,7	Introduction to Axonometric projections, Types of axonometric projections.	Develop Isometric/diometric/triometric views of geometrical objects- cube, cuboid, cone and given orthographic projection.
10	3	1,2,7	Demonstrate procedure to solve problems on axonometric views of solids to accurately represent objects with correct nomenclature, line weights etc.	Develop Isometric/diometric/triometric views of geometrical objects - cylinder, prism, and pyramid and given orthographic projection.
11	4	1,2,7	Principles and elements of Perspective projection.	Practice problems on One-point perspective drawing for objects like- cube, cuboid, pyramid, prism, and simple objects
12	4	1,2,7	Principles and elements of two-point Perspective projection.	Prepare a sheet to Demonstrate elements of perspective drawing and develop two-point perspective drawing for cube and cuboid.
13	4	1,2,7	Demonstrate procedure to solve problems on perspective projection	Practice problems on One-point and two point perspective drawing for

		of solids to accurately represent projections with correct nomenclating, line weights etc.	objects like- pyramid, prism, steps, pitched roof etc.
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#### 4. References:

1. Francis D. K. Ching, Architectural Graphics
2. Engineering Drawing by N D Bhatt.
3. Engineering Graphics and Design by A.P. Gautam, Pradeep Jain, Ankita Maheshwari.
4. ENGINEERING DRAWING, by Dhananjay Jolhe.
5. ENGINEERING DRAWING, by R K Dhawan
6. ENGINEERING DRAWING, by Shah P. J.
7. K.R.Gopalakrishna“ Fundamentals of Drawing” Subhas Publications, 2010.
8. Geometrical Art and Drawing - I. H.Morris.

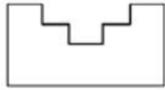
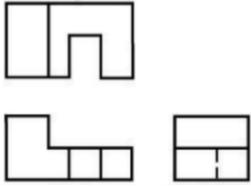
#### 5. CIE Assessment Methodologies

Sl. No	CIE Assessment	Test Week	Duration (minutes)	Max marks	Average of all CIE=50 Marks
1.	CIE-1 Theory Test	4	90	50	
2.	CIE-2 Practice Test	7	180	50	
3	CIE-3 Practice Test	10	180	50	
4.	CIE-4 Practice Test	13	180	50	
5	CIE-5 Portfolio evaluation of all the activities through Rubrics	1-13		50	
<b>Total</b>					<b>50 Arks</b>

#### 6.SEE - Practice Assessment Methodologies

Sl. No	SEE - Practice Assessment	Duration (minutes)	Max marks	Min marks to pass
1.	Semester End Examination-Practice	180	50	20

## 7.CIE Theory Test model question paper

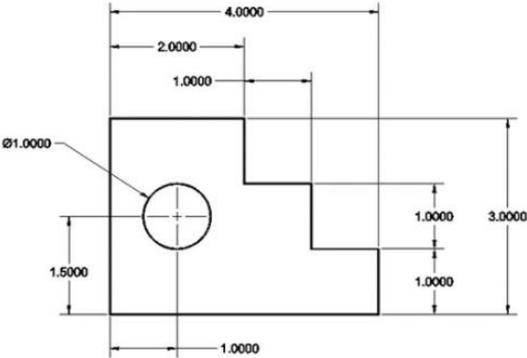
<b>Program</b>	<b>Architecture Assistantship</b>			<b>Semester -</b>	
<b>Course Name</b>	<b>Architectural Graphics</b>			<b>Test</b>	<b>I</b>
<b>Course Code</b>	<b>25AR22I</b>	<b>Duration</b>	<b>90 min</b>	<b>Marks</b>	<b>50</b>
<b>Name of the Course Coordinator:</b>					
<b>Note:</b> Answer any one full question from each section. Each full question carries equal marks.					
<b>Q.No</b>	<b>Questions</b>	<b>Cognitive Level</b>	<b>Course Outcome</b>	<b>Marks</b>	
<b>Section - 1</b>					
1	a) Sketch any 5 types of lines in Architectural Graphics and mention its uses	L3	1	10	
	b) construct a pentagon of sides 30mm without angular instruments	L3		10	
	c) list any 5 drafting instruments and mention its use in drafting	L1		05	
2	a) Identify various dimensioning systems.	L4	1	10	
	b) Develop the given sketch and dimension the same using unidirectional system.	L3		10	
		L1		05	
	c) Write a note on Scales				
<b>Section - 2</b>					
3	a) What is development of surfaces?	L1	3	5	
	b) Explain methods of development of surfaces	L2		10	
	c) Develop surfaces for a cube with edges 40mm.	L3		10	
4	d) What is Axonometric projection?	L1	3	5	
	e) Explain types of Axonometric projections.	L2		10	
	f) Develop isometric view for a given object.	L3		10	
					
Note for the Course coordinator: Each question may have one, two or three subdivisions. Optional questions in each section carry the same weightage of marks, cognitive level and course outcomes.					

**Signature of the  
Course Coordinator**

**Signature of the HOD**

**Signature of the IQAC Chairman**

### 8. CIE Practice Test model question paper

<b>Program</b>	<b>Architecture Assistantship</b>		<b>Semester</b>	
<b>Course Name</b>	<b>Architectural Graphics</b>		<b>Test</b>	<b>II/III/IV</b>
<b>Course Code</b>	<b>25AR22I</b>	<b>Duration</b>	<b>180 min</b>	<b>Marks</b>
				<b>50</b>
<b>Name of the Course Coordinator:</b>				
<b>Questions</b>			<b>CO</b>	<b>Marks</b>
<p>1. Reproduce the views given sketch, to its full size and dimension the same by Aligned dimensioning system.</p> 			<b>1</b>	<b>10</b>
<p>2. Construct a pentagon of side of length 35mm without angular instrument.</p>			<b>1</b>	<b>10</b>
<p>3. Draw orthographic projection of a cube with side of 60mm resting on HP and with one its side parallel to vertical plane. Draw the top view, front view. LPP and RPP are at 25mm &amp; 35mm from these 2 planes of projection.</p>			<b>2</b>	<b>30</b>
Scheme of assessment				
1) Reproducing sketch to full scale & Dimensioning				<b>10</b>
2) Construction of pentagon without angular instruments				<b>10</b>
3) Accurately solving problem on projections				<b>30</b>
<b>Total Marks</b>				<b>50</b>

**Signature of the Course Coordinator**

**Signature of the HOD**

## 9. Suggestive Activities for Tutorials:

The List is an Example and not inclusive of all possible activities of the course. Student and Faculty are encouraged to choose activities that are relevant to the topic

Sl.No.	Suggestive Activities for Tutorials
01	Practice horizontal, vertical and angular lines using drafting tools to get adapted to drawing with precision
02	Identify various sizes of sheets used in drafting and printing
03	Demonstrate, model making for development of surfaces.
04	Use models of geometrical objects to observe projections and perspective

## 10. Rubrics for Assessment of Activity (Qualitative Assessment)

Sl. No.	Dimension	Beginner	Intermediate	Good	Advanced	Expert	Students Score
		2	4	6	8	10	
1		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	8
2		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	6
3		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	2
4		Descriptor	Descriptor	Descriptor	Descriptor	Descriptor	2
Average Marks=(8+6+2+2)/4=4.5							5

**Note:** Dimension and Descriptor shall be defined by the respective course coordinator as per the activities

## 11. SEE- Model Practice Question Paper

Program	Architecture Assistantship		Semester	II
Course Name	Architectural Graphics	Course Code: 25AR22I	Duration	180 min
Questions			CO	Marks
1. Construct a pentagon of side of length 35mm without angular instrument.			1	5
2. A Hexagonal pyramid of base edge 30mm and axis length 65 mm is resting on its apex such that the axis of the pyramid is perpendicular to HP. Two of its adjacent base edges make equal inclinations with VP and lies nearer to it. Draw the projections of the pyramid when the axis lies at 25 mm in front of VP 25 mm from L.P.P and 40 mm from R.P.P respectively.			2	15
3. A rectangular pyramid of sides of base 30 mm x 20 mm and height 50 mm rests with its base on ground such that one of its longer base edges is parallel to picture plane and 30 mm behind it. The station point is 50 mm in front of picture plane, 30 mm to the left of axis of pyramid and 50 mm above ground level. Draw the perspective of pyramid.			4	20

4. Sessional Work		<b>10</b>
<b>Scheme of assessment</b>		
a) Dimensioning/construction of polygons/ scaling.		<b>5</b>
b) Solving problems on Orthographic projections.		<b>15</b>
c) Solving problems on perspective projection.		<b>20</b>
d) Sessional Work		<b>10</b>
<b>Total Marks</b>		<b>50</b>

1) Signature of the Examiner

2) Signature of the Examiner

### 12. Equipment/software list with Specification for a batch of 30 students

<b>Sl.No.</b>	<b>Particulars</b>	<b>Specification</b>	<b>Quantity</b>
01	Drawing tables	Standard drafting table size	30
02	LCD Projector	As per requirement	1
03	Drafting instruments	T scale, Set square, metric scale	30