

SYLLABUS FOR ARCHITECTURAL DRAUGHTSMAN TRADE			
FIRST YEAR			
Duration	Reference Learning Outcome	Professional Skills (Trade Practical) With Indicative Hours	Professional Knowledge (Trade Theory)
Professional Skill 56 Hrs.; Professional Knowledge 12 Hrs.	Draw different types of architectural symbols following safety precautions.	Familiarization 1. Importance of safety and general precautions observed in the institute and in the section. (10 hrs.) 2. Importance of the trade in the development of the country's infrastructure. (06 hrs.) 3. Recreational, medical facilities and other extracurricular activities of the institute. (06 hrs.) 4. All necessary guidance to be provided to the new comers to become familiar, with the working of training institute. (06 hrs.)	Orientation Familiarization with the institute Importance of trade training Introduction to the trade and professional prospects Orientation of subjects Familiarization with engineering drawing, tools and equipment. (06 hrs.)
		Architectural symbols 5. Free hand lettering styles. (07 hrs.) 6. Architectural symbol for materials, doors, windows. (07 hrs.) 7. Architectural symbols for trees, plants, shrubs. (07 hrs.) 8. Architectural symbols for plumbing and electrical fittings and fixtures. (07 hrs.)	Architectural Symbols Architectural signs and symbols and their uses in the drawings (06 hrs.)
Professional	Draw different	Sketching	Sketching techniques

<p>Skill 28 Hrs.;</p> <p>Professional Knowledge 06 Hrs.</p>	<p>types free hand sketches.</p> <p>Draw different type of letterings.</p>	<p>9. Free hand sketching of trees, plants and shrubs. (05 hrs.)</p> <p>10. Free hand sketching of landscape and monuments. (05 hrs.)</p> <p>11. Free hand sketching of objects. (05 hrs.)</p> <p>12. Lettering – types of lettering, legibility, uniformity. (08 hrs.)</p> <p>13. Purpose and uses of lines, curves, line weight, types of lines. (05 hrs.)</p>	<p>Elements of drafting, readability, clarity, accuracy and neatness</p> <p>Pencil grades</p> <p>Method of pencil uses</p> <p>Uses of different brush strokes</p> <p>Various types of lines used for sketching (06 hrs.)</p>
<p>Professional Skill 28 Hrs.;</p> <p>Professional Knowledge 06 Hrs.</p>	<p>Draw different types of plane geometry.</p>	<p>Plane geometry</p> <p>14. Draw a line parallel to any given point. (04 hrs.)</p> <p>15. Divide a line into any number of equal parts different methods. (04 hrs.)</p> <p>16. Bisect a line, arc or angle. (04 hrs.)</p> <p>17. Geometrical constructions using different method – square, pentagon, triangle, hexagon, heptagon, octagon, ellipse. (06 hrs.)</p> <p>Dimensioning</p> <p>18. Basic system of measurement, dimensional control, location, dimensioning of different objects like lines, circle, curves and angles Scale and proportion. (10 hrs.)</p>	<p>Solids</p> <p>Definition of solids – cube, square prism, hexagonal prism, triangular prism, square prism, triangular pyramid, hexagonal pyramid, pentagonal pyramid, cylinder, sphere, cone. (06 hrs.)</p>
<p>Professional Skill 112 Hrs.;</p>	<p>Draw orthographic projections.</p>	<p>Introduction to orthographic projections</p> <p>19. Types of projections. (06 hrs.)</p>	<p>Types of projections</p> <p>Types of projections</p> <p>Projection planes</p> <p>First angle projection</p>

<p>Professional Knowledge 24 Hrs.</p>		<p>20. Projection planes. (06 hrs.) 21. First angle projection. (06 hrs.) 22. Third angle projection. (06 hrs.) 23. Method of drawing orthographic projections. (06 hrs.) Projections of lines and lamina 24. Projections of lines in simple position. (12 hrs.) 25. Projection of lamina in simple position. (12hrs.) Projection of solids in simple positions 26. Drawing plan, elevation and side elevation of simple solids like cube, pyramid, prism, cone, cylinder in first angle projection. (30 hrs.) 27. Drawing projection of solids in third angle projection in simple positions. (28 hrs.)</p>	<p>Third angle projection Isometric view Isometric view of geometrical solids (24 hrs.)</p>
<p>Professional Skill 56 Hrs.; Professional Knowledge 12 Hrs.</p>	<p>Draw different sizes of Bricks and Brick Masonry.</p>	<p>Brick masonry 28. Sizes of brick and brick bats. (10 hrs.) 29. English and Flemish bond for one brick thick and one and half brick thick wall. (18 hrs.) 30. Different types of bonds (zig zag bond, diagonal bond, stretcher bond, header bond, monk wall bond, herring bone bond, Dutch bond, garden wall bond). (28 hrs.)</p>	<p>Brick masonry Technical terms, Sizes of brick and brick tiles, Principle of brick masonry construction, English and Flemish bond for one brick thick and one and half brick thick wall, Different types of bonds and their uses in construction, Hollow brick masonry, AAC Block, Fly-ash brick (12 hrs.)</p>
<p>Professional Skill 28 Hrs.;</p>	<p>Draw different types of Stone</p>	<p>Stone masonry 31. Coursed and uncoursed</p>	<p>Stone masonry Technical terms</p>

Professional Knowledge 06 Hrs.	Masonry.	<p>rubble masonry. (06 hrs.)</p> <p>32. Random rubble masonry. (06 hrs.)</p> <p>33. Ashlar masonry. (06 hrs.)</p> <p>34. Composite masonry (stone facing with brick backing, stone facing with concrete backing, stone facing with rubble backing). (10 hrs.)</p>	<p>Principles of stone masonry</p> <p>Rubble masonry</p> <p>Ashlar masonry</p> <p>Composite masonry (06 hrs.)</p>
Professional Skill 28 Hrs.; Professional Knowledge 06 Hrs.	Draw different types of Foundation.	<p>Foundation</p> <p>35. Types of foundation – spread foundation, grillage foundation, pile foundation, raft or mat foundation. (28 hrs.)</p>	<p>Foundation</p> <p>Purpose of foundation</p> <p>Causes of failure of foundation</p> <p>Types of foundation – spread foundation, grillage foundation, pile foundation, raft or mat foundation (06 hrs.)</p>
Professional Skill 28 Hrs.; Professional Knowledge 06 Hrs.	Draw different Carpentry Joints.	<p>Carpentry Joints</p> <p>36. Lengthening spliced or longitudinal joints. (04hrs.)</p> <p>37. Bearing joints. (04 hrs.)</p> <p>38. Framing joints. (05hrs.)</p> <p>39. Angle or corner joints. (05 hrs.)</p> <p>40. Widening or side joints. (05 hrs.)</p> <p>41. Oblique-shouldered joints. (05hHrs.)</p>	<p>Carpentry Joints</p> <p>Technical terms Lengthening joints and their uses Bearing joints and their uses Framing joints and their uses Angle or corner joints and their uses Widening or side joints and their uses Oblique-shouldered joints and their uses (06 hrs.)</p>
Professional Skill 56 Hrs.; Professional Knowledge 12 Hrs.	Draw different types of Wooden Doors and Windows.	<p>Doors</p> <p>42. Details of paneled door, flush door, batten and ledged door. (28 hrs.)</p> <p>Windows</p> <p>43. Details of casement window, louvered window, ventilator. (28 hrs.)</p>	<p>Doors</p> <p>Standard Sizes of doors</p> <p>Types of doors - paneled door, flush door, batten and ledged door</p> <p>Windows</p> <p>Standard Sizes of windows</p> <p>Details of casement window, louvered window, ventilator</p> <p>Fixtures and fasteners</p> <p>Types of joints (used in</p>

			doors and windows) (12 hrs.)
Professional Skill 28 Hrs.; Professional Knowledge 06 Hrs.	Draw different types of Lintels	Lintels 44. Details of Wooden lintel, stone lintel, brick lintel, steel lintel, RCC lintel, Chajjas. (28 hrs.)	Lintels Purpose of lintel Types and uses of lintels – wooden lintel, stone lintel, brick lintel, steel lintel, RCC lintel, Chajjas (06 hrs.)
Professional Skill 28 Hrs.; Professional Knowledge 06 Hrs.	Draw different types of Arches.	Arches 45. Details of semicircular arch, flat arch, segmental arch, pointed arch, two centered arch. (28 hrs.)	Arches Technical terms Materials used for construction of arches Types of arches and their uses – flat arch, semicircular arch, segmental arch, semi elliptical arch, two centered arch, three centered arch. (06 hrs.)
Professional Skill 84 Hrs.; Professional Knowledge 18 Hrs.	Draft in CAD.	CAD 46. Introduction to CAD. (03hrs.) 47. Starting procedures of CAD – screen appearance, tool bar, menu bar, quick access tool bar, command tool bar, units, settings, dimensioning. (04 hrs.) 48. Basic CAD drafting commands - 1 – line, circle, arc, ellipse, copy, move, rotate, erase, undo, mirror, offset, fillet, polygon, trim, extend, explode. (05 hrs.) 49. Basic CAD commands 2 – rectangle, array, scale, stretch, break, join, chamfer, spline, colors, line type, line weight, properties, match properties, hatch. (05 hrs.)	Factors considered in architectural design Understanding the basic elements of design like point, line, plane, figure, form and space, light and color, texture. (18 hrs.)

		<p>50. Draft a plan and elevation of a 3-seater sofa / 1 seater sofa basic CAD commands. (15 hrs.)</p> <p>51. Draft plan of chair using Basic CAD commands. (15 hrs.)</p> <p>52. Draft door elevation using basic CAD commands. (15 hrs.)</p> <p>53. Draft interiors of bedroom/living room using basic CAD commands. (22 hrs.)</p>	
<p>Professional Skill 56 Hrs.;</p> <p>Professional Knowledge 12 Hrs.</p>	<p>Draw details of Damp proof Course (DPC) and Water Proofing Treatment at different locations.</p>	<p>Damp proof Course (DPC)</p> <p>54. Details at plinth level. (15 hrs.)</p> <p>55. Details at terrace level (Water Proofing Treatment). (14 hrs.)</p> <p>56. Details at basement level. (15 hrs.)</p> <p>57. Details of cavity wall. (12 hrs.)</p>	<p>Damp proof Course (DPC)</p> <p>Definition</p> <p>Sources of dampness</p> <p>Prevention methods of dampness – integral treatment, surface treatment, membrane damp proofing, cavity wall construction</p> <p>Materials used in DPC – mastic asphalt, hot laid bitumen, metal sheets, PCC etc. (12 hrs.)</p>
<p>Professional Skill 56 Hrs.;</p> <p>Professional Knowledge 12 Hrs.</p>	<p>Draw plan, elevation and side view of Solids in inclined positions and Section of Solids.</p>	<p>Projection of Solids in inclined positions</p> <p>58. Drawing plan, elevation and side elevation of inclined solids like cube, pyramid, prism, cone, cylinder in first angle projections. (28 hrs.)</p> <p>Section of solids</p> <p>59. Drawing projection of solids in different section plane. (28 hrs.)</p>	<p>Anti-termite treatment</p> <p>Types of Anti termite treatment</p> <p>Treatment to basement in ordinary soil</p> <p>Treatment to basement in damp soil (12 hrs.)</p>
<p>Professional Skill 56 Hrs.;</p>	<p>Illustrate design procedure of Residential</p>	<p>Introduction to design</p> <p>60. Design topic – Residential. (24 hrs.)</p>	<p>Design principles – balance, proportion, perspective, movement, rhythm,</p>

Professional Knowledge 12 Hrs.	Building.	61. Concept and visualization of design. (32hrs.) (Students should be able to understand the process of designing and the design project will go throughout the year)	harmony, unity, symmetry and contrast (12 hrs.)
Professional Skill 56 Hrs.; Professional Knowledge 12 Hrs.	Draw plan, elevation and section through toilet of the residential building and the site plan with landscape.	Preliminary drawing 62. Drawing to be prepared by trainees in AUTOCAD based on single floor residential building after analyzing the requirement and area analysis. (12 hrs.) 63. Initial sketches/preliminary drawings manually. (10 hrs.) 64. Sketches of the plan. (06 hrs.) 65. Front elevation and one side elevation. (06 hrs.) 66. Section through staircase or toilet. (16 hrs.) 67. Site plan with landscaping. (06 hrs.)	Conceptual design ideas – site analysis, site planning, requirements, space designation, proportionately defined rooms, single line diagram, floor plan analysis, functional planning. (12 hrs.)
Professional Skill 28 Hrs.; Professional Knowledge 06 Hrs.	Draw typical vertical section of an external wall of two storied load bearing structure and RCC framed structure.	68. Load bearing wall. (12 hrs.) 69. RCC framed structure. (16 hrs.)	Pre-fabricated panels RCC, GI Powder coated steel panels. (06 hrs.)
Professional Skill 84 Hrs.; Professional Knowledge 18 Hrs.	Draw Plan, elevation and Construction Details of different types of stairs.	Stairs 70. Plan and elevation of different types of stairs – straight stairs, quarter turn stairs, open well stairs, bifurcated stairs, circular stairs. (26 hrs.) 71. Construction Details of	Stairs Technical terms General dimensions and arrangements Requirements of good stairs Ashlar masonry Classification of stairs – straight flight stairs, dog legged stairs, newel

		<p>dog-legged stairs, baluster details, railing, nosing, tread and riser calculation. (26 hrs.)</p> <p>72. Details of wooden stairs. (16 hrs.)</p> <p>73. Details of MS spiral stairs. (16 hrs.)</p>	<p>stairs, open well stairs, geometrical stairs, circular stairs, bifurcated stairs, spiral stairs, stairs of different materials – wooden stairs, stone stairs, metal stairs, reinforced concrete stairs (18 hrs.)</p>
<p>Professional Skill 56 Hrs.;</p> <p>Professional Knowledge 12 Hrs.</p>	<p>Draw different types of flooring details.</p>	<p>Floors and flooring</p> <p>74. Components of ground floor. (10 hrs.)</p> <p>75. Details of cement flooring. (10 hrs.)</p> <p>76. Details of stone / tile flooring. (12hrs.)</p> <p>77. Details of wooden suspended flooring. (12 hrs.)</p> <p>78. Details of wooden double floor. (12 hrs.)</p>	<p>Floors and flooring</p> <p>Components of floor – sub floor, floor covering, construction of ground floor, selection of floorings Suspended floors Floor coverings Ground and basement floor (12 hrs.)</p>
<p>Professional Skill 84 Hrs.;</p> <p>Professional Knowledge 18 Hrs.</p>	<p>Produce final project work applying advance CAD commands and File management.</p>	<p><u>CAD</u></p> <p>79. Advance CAD commands – layers, block, insert, group, divide, measure, design center, text gradient, dimension style, leader, layouts, model space view ports, File management. (20 hrs.)</p> <p><u>Final design</u></p> <p>80. Final floor plans showing living room, kitchen, bedrooms, toilet, logical order from the main entrance, basic area with furniture, garage and driveway, pedestrian ways, levels, north line, section line, scale, dwv schedule, statement of area etc. (30 hrs.)</p> <p>81. Front elevation with all</p>	<p>History of architecture (HOA)</p> <p>Egyptian architecture Characteristic features of Egyptian architecture Tombs mastaba pyramid – the great pyramid at cheops at giza the great sphinx of chephren</p> <p>Greek architecture Greek columns like doric order, ionic order, corianthan order Characteristic features of the temple of Parthenon at Athens, Olympia stadium at athens (18 hrs.)</p>

		<p>heights and levels mentioned. (17 hrs.)</p> <p>82. One side elevation with all heights and levels mentioned(17 Hrs.)</p> <p>Note: design elements to keep in consideration while designing the elevations</p>	
<p>Professional Skill 84 Hrs.;</p> <p>Professional Knowledge 18 Hrs.</p>	<p>Surface Development of geometrical solids.</p>	<p>Surface Development</p> <p>83. Developing surface Development of solids. (28 hrs.)</p>	<p>Roman architecture</p> <p>Characteristic features of the temples of Saturn at rome, the pantheon at Athens, basilica of Trajan at rome. (06 hrs.)</p>
		<p>84. Detailed section through staircase / toilet with all heights and levels mentioned. (All presentation drawing to be submitted as project spiral binding). (38 hrs.)</p>	<p>Indian architecture</p> <p>Stupas and its characteristic features and typical examples Typical Buddhist column or order Northern Indian style elements and characteristic features (lingaraja temple at Orissa, sun temple at konark, temple of khajuraho) (06 hrs.)</p>
		<p>85. Final site plan with landscape elements. (18 hrs.)</p> <p>(Note: subject of drawing, scale, date, job no, address, ph.no, north – south direction, sheet no. to be mentioned in all the sheets. Drawing produced should be well readable and self-explanatory.)</p>	<p>Central hindu style elements and characteristic features (rock cut temples at badami and Humpi, hoysaleswar temple at halebid) South hindu or Dravidian style elements and characteristic features (shore temple at mahabalipuram, brihadesvar temple at tanjavur, temple of Madurai) (06 hrs.)</p>
<p>Project work / site visit</p> <ul style="list-style-type: none"> • Project work on a single floor residence with furniture layout – plan, elevation and section (single line diagram to be made available) • Site visit to any of the construction site / study tour to historical monuments to observe the details 			

SYLLABUS FOR ARCHITECTURAL DRAUGHTSMAN TRADE			
SECOND YEAR			
Duration	Reference Learning Outcome	Professional Skills (Trade Practical) With Indicative Hours	Professional Knowledge (Trade Theory)
Professional Skill 56 Hrs.; Professional Knowledge 16 Hrs.	Illustrate Design-Concept and visualization of design. Topic: Residential (single/double storied), Post office, Farmhouse.	Introduction to design 86. Design topic Residential (single/ double storied)/Post office/ farm house. (36 hrs.) 87. Concept and visualization of design. (20 hrs.) (Students should be able to understand the process of designing and the design project will go throughout the year.)	Factors considered in architectural design Approaches to planning Open planning Closed planning (16 hrs.)
Professional Skill 56 Hrs.; Professional Knowledge 16 Hrs.	Draw sanction drawing with local authority by laws.	Case study 88. Case study of similar project to be done. A complete project report also to be submitted. (56 hrs.)	Factors considered in architectural design Circulation – horizontal circulation, through circulation, vertical circulation, open court circulation. (16 hrs.)
Professional Skill 56 Hrs.; Professional Knowledge 16 Hrs.	Preliminary drawing of the Design project in AUTOCAD.	Preliminary drawing 89. Drawing to be prepared by trainees in AUTOCAD based on design project after analyzing the requirement and area analysis. (08 hrs.) 90. Initial sketches/preliminary drawings manually. (10 hrs.) 91. Sketches of the plan. (06 hrs.) 92. Front elevation and one	Environmental factors considered in architectural design Orientation of building Effects of wind Window positioning Space designation Proportionately defined rooms. (16 hrs.)

		<p>side elevation. (07 hrs.)</p> <p>93. Section through staircase or toilet. (15 hrs.)</p> <p>94. Site plan with landscaping. (10 hrs.)</p>	
<p>Professional Skill 28 Hrs.;</p> <p>Professional Knowledge 08 Hrs.</p>	<p>Read and Interpret structural drawing.</p>	<p>95. RCC slab details (13 hrs.)</p> <p>96. Column foundation (15 hrs.)</p>	<p>Reading and interpretation of structural drawing.</p> <p>One way slab, two way slab.</p> <p>Single reinforced beam.</p> <p>Double reinforced beam.</p> <p>Column foundation.</p> <p>Stair case Waist slab. (08 hrs.)</p>
<p>Professional Skill 84 Hrs.;</p> <p>Professional Knowledge 24 Hrs.</p>	<p>Draw 3 D model by sketch up software along with rendering, walkthrough, animated view.</p>	<p>Introduction to 3D in sketch-up software</p> <p>97. Setup, new document, open, save and close (10 hrs.)</p> <p>98. Styles colors and materials (20 hrs.)</p> <p>99. Layers (20 hrs.)</p> <p>100. Practice or project in sketch up (34 hrs.)</p>	<p>-do- (24 hrs.)</p>
<p>Professional Skill 56 Hrs.;</p> <p>Professional Knowledge 16 Hrs.</p>	<p>Draw details of different types of doors.</p>	<p>Special doors</p> <p>101. Details of revolving doors. (12 hrs.)</p> <p>102. Details of sliding doors. (14 hrs.)</p> <p>103. Details of metal doors. (12 hrs.)</p> <p>104. Details of rolling steel shutter doors or rolling grill doors. (18 hrs.)</p>	<p>Special doors</p> <p>Louvered doors, collapsible doors, rolling steel shutter door, revolving door, sliding door, metal doors (16 hrs.)</p>
<p>Professional Skill 56 Hrs.;</p> <p>Professional Knowledge 16 Hrs.</p>	<p>Draw details of different types of windows.</p>	<p>Special windows</p> <p>105. Details of sliding windows. (10hrs.)</p> <p>106. Details of metal windows. (12 hrs.)</p> <p>107. Details of bay windows. (12 hrs.)</p> <p>108. Details of UPVC</p>	<p>Special windows</p> <p>Bay windows, dormer windows, sliding windows, metal windows (16 hrs.)</p>

		windows. (10 hrs.) 109. CRCA sheets / Pressed steel windows. (12 hrs.)	
Professional Skill 56 Hrs.; Professional Knowledge 16 Hrs.	Draw details of roofs and roof covering.	Roof and roof coverings 110. Details of lean-to roof. (10 hrs.) 111. Details of couple or span roof. (10 hrs.) 112. Details of king post truss. (10 hrs.) 113. Details of queen post truss. (10 hrs.) 114. Methods of laying and fixing AC sheets to different types of purlins. (16 hrs.)	Roof and roof coverings Technical terms Classification of pitched roof – lean to roof, couple roof, closed couple roof, collar roof, scissor roof, king post truss, queen post truss (16 hrs.)
Professional Skill 56 Hrs.; Professional Knowledge 16 Hrs.	Prepare final design drawings in AUTOCAD.	Final design 115. All floor plans rendered with furniture layout. (12 hrs.) 116. Front elevation and one side elevation rendered. (12 hrs.) 117. Section through stairs/toilet rendered (12 hrs.) 118. Final site plan with landscape elements rendered. (20 hrs.) (Note: subject of drawing, scale, date, job no, address, ph.no, north, sheet no. to be mentioned in all the sheets. Drawing produced should be well readable and self-explanatory)	Roof covering materials – wooden shingles, asbestos cement sheets, galvanized corrugated iron sheets, asphaltic roofing sheets (16 hrs.)
Professional Skill 56 Hrs.; Professional Knowledge 16 Hrs.	Draw working drawing set to the site to execution.	Working drawing 119. All floor plans working drawing showing all dimensions of rooms and column grids with door window schedule and	-do- (16 hrs.)

		<p>details if any. (24 hrs.)</p> <p>120. All four elevations with floor heights, lintel heights, sill heights and details if any. (16 hrs.)</p> <p>121. Section through staircase or toilet with complete details. (16 hrs.)</p>	
<p>Professional Skill 56 Hrs.;</p> <p>Professional Knowledge 16 Hrs.</p>	<p>Draw the Anthropometrics & ergonomics of commercial building.</p> <p>Draw Standard sizes of outdoor movements like swimming pool, basketball court, badminton court, play area etc.</p>	<p>Case study</p> <p>122. Case study of project like small scale residential apartment/primary school/small office design for 50 people to be done. (12 hrs.)</p> <p>Anthropometrics of commercial building</p> <p>123. Furniture design, its standard sizes and area required around for movement and height (office layout, reception layout, cabin layout, swimming) (24 hrs.)</p> <p>124. Standard sizes of outdoor movements like swimming pool, basketball court, badminton court, play area etc. (20 hrs.)</p>	<p>Case study</p> <p>A complete project report also to be submitted with all plans and photographs and details of the given project (16 hrs.)</p>
<p>Professional Skill 84 Hrs.;</p> <p>Professional Knowledge 24 Hrs.</p>	<p>Prepare design and the site plan with landscape of Residential Apartment/primary school in AUTOCAD</p>	<p>Preliminary drawing</p> <p>125. Drawing to be prepared by trainees in AUTOCAD based on design project after analyzing the requirement and area analysis. (12 hrs.)</p> <p>126. Initial sketches/preliminary drawings manually. (15 hrs.)</p>	<p>Climatic responsive design</p> <p>Study of climates in India</p> <p>Sun path diagram and orientation of building with respect to the climate.</p> <p>Positioning of windows and open spaces as per climatic need</p> <p>Fundamentals of climate responsive planning</p> <p>Passive solar design. (24 hrs.)</p>

		<p>127. Sketches of the plan. (10 hrs.)</p> <p>128. Front elevation and one side elevation. (12 hrs.)</p> <p>129. Section through staircase or toilet. (20 hrs.)</p> <p>130. Site plan with landscaping. (15 hrs.)</p>	
<p>Professional Skill 84 Hrs.;</p> <p>Professional Knowledge 24 Hrs.</p>	<p>Draw joints in structures (viz. Details of construction joints at various positions, Details of expansion joints in walls, roof)</p>	<p>Joints in structure</p> <p>131. Details of construction joints at various positions. (56 hrs.)</p> <p>132. Details of expansion joints in walls, roof. (28 hrs.)</p>	<p>Expansion joints and construction joints</p> <p>Need for expansion joints in building</p> <p>Construction joints – Contraction joints, isolation joints, dummy joints, sliding joints. position of construction joints</p> <p>Expansion joints in walls and roofs, spacing of expansion joints, materials used in expansion joints (24 hrs.)</p>
<p>Professional Skill 196 Hrs.;</p> <p>Professional Knowledge 56 Hrs.</p>	<p>Prepare 3D model and BOQ using BIM software (REVIT ARCHITECTURE)</p>	<p>133. Preparation of 3D model and BOQ using BIM software like Revit, etc. (35 hrs.)</p> <p>134. Creating 3D model from 2D plane. (35 hrs.)</p> <p>135. Generation of surfaces. (30 hrs.)</p> <p>136. Material editor. (30 hrs.)</p> <p>137. Lighting and rendering. (32 hrs.)</p> <p>138. Quantity calculation of materials. (34 hrs.)</p>	<p>-do- (56 hrs.)</p>
<p>Professional Skill 56 Hrs.;</p> <p>Professional Knowledge 16 Hrs.</p>	<p>Perform rendering in Photoshop (Convert the drawings in pdf and then render it in photoshop with necessary details)</p>	<p>Rendering in Photoshop</p> <p>139. Convert the floor plans, elevation, section and 3d views in pdf and then render the drawings in photoshop with necessary details. (56</p>	<p>Green Architecture / sustainable architecture</p> <p>Green building and its importance.</p> <p>Benefits of green building</p> <p>Fundamentals of green building</p>

		hrs.)	Material and resources Water efficiency (16 hrs.)
Professional Skill 84 Hrs.;	Prepare Working drawing:	140. Kitchen layout. (22 hrs.)	Energy conservation
Professional Knowledge 24 Hrs.	Kitchen layout, Electrical layout, Plumbing Layout DWV details	141. Electrical layout. (22 hrs.) 142. Plumbing Layout. (22 hrs.) 143. DWV details. (18 hrs.)	Sustainable site selection Green building rating system – LEED/ GRIHA (24 hrs.)
Project work / site visit			
Broad Area:			
<ul style="list-style-type: none"> a) Compiling and final submission of Project work b) Study tour to historical places to familiarize culture and heritage. 			