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| Title | **Apply drafting fundamentals** | | |
| Level | **1** | **Credits** | **25** |

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| Purpose | This Competency Standard identifies the competencies required to apply drafting fundamentals at workplace by an architect in accordance with the organization’s approved guidelines and procedures. You will be expected to create geometrical construction, single view drawings and orthographic projections, either manually or computerized at workplace. Your underpinning knowledge regarding drafting fundamentals will be sufficient to provide you the basis for your work. |

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| Classification ISCED | 0732 Building and civil engineering |

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| Available grade | Competent / Not yet competent |

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| Modification history | N/A |

| **Unit of Competency** | **Performance Criteria** | **Knowledge** | **Tools & Equipment** |
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| A1: Know free-hand drawings/ sketching & basic lines | You will be able to:  P1. Draw rough lines in different angles   * Draw lines in different direction using grades of pencils   P2. Draw (free hand) basic shapes  P3. Familiarize with the use of T-scale & Set-square  P4. Handle drafting tools appropriately | You will be able to:  K1. Describe the methodology of stretching of sheet for drawing  K2. Describe division of sheet  K3. Describe drawing different lines (Free hand, Straight, Angular And Curves)  K4. Demonstrate Construction of Seal / Title Strip  K5. Demonstrate flow of pencil and line joinery | **Manual:**   * A-3 sketchbook * Various grades of soft & hard lead pencil * Eraser * Sharpener |
| A1. Draw basic geometric shapes | You will be able to:  P1. Select tools required for the job  P2. Specify construction details as per assignment  P3. Select scale required for the object according to construction detail  P4. Draw construction lines according to object sizes  P5. Convert construction lines into object lines as per object requirement  P6. Mark dimensions of the whole object as per drawn sizes  P7. Prepare backup file for the assignment to avoid data loss  P8. Apply health and safety precautions at workplace | You will be able to:  K1. Describe usage of tools for this job  K2. Explain the concept of geometrical construction   * Triangle * Square/rectangle * Circle * polygon   K3. Describe the use of scale for the assignment  K4. Describe the types of line  K5. Describe dimensioning standards  K6. Describe the file saving and backup method    K7. Describe specific safety precautions and guidelines | **Manual:**  Drafting table with necessary attachments  (horizontal and vertical bar with angle adjustment), architectural triangular scale, stationary items (pencil, rubber, paper), geometry box (compass, divider, attachments, protector)  **Computer:**  Workstation, Drafting software (latest version), output devices for printing, personal protective equipment (PPE) |
| A2. Create single view drawing | You will be able to:  P1. Select tools required for the job  P2. Specify object details as per assignment  P3. Select scale required for the object according to the view  P4. Draw construction lines according to object sizes  P5. Convert construction lines into object lines as per view requirement, to represent actual object  P6. Mark dimensions of the whole object as per drawn size | You will be able to:  K1. Describe usage of tools for this job  K2. Explain the concept of single view drawing  K3. Describe the use of scale for the assignment  K4. Describe the types of line  K5. Describe the concept and types of projection  K6. Describe dimensioning standards | **Manual:**  Drafting table with necessary attachments  (horizontal and vertical bar with angle adjustment), architectural triangular scale, stationary items, geometry box (compass, divider, attachments, protector)  **Computer:**  Workstation, Drafting software (latest version), output devices for printing, PPE |
| A3. Create orthographic projections | You will be able to:  P1. Select tools required for the job  P2. Specify object details as per assignment  P3. Select scale required for the object according to the view  P4. Draw construction lines according to object sizes  P5. Use the following:   1. First angle projection method 2. Third Angle projection method   P6. Convert construction lines into object lines as per view requirement  P7. Mark dimensions of the whole object as per drawn sizes | You will be able to:  K1. Describe the use of tools for this job  K2. Explain the concept of orthographic projection  K3. Describe the following   1. First angle projection method 2. Third Angle projection method   K4. Describe dimensioning standards | **Manual:**  Drafting table with necessary attachments  (horizontal and vertical bar with angle adjustment), architectural triangular scale, stationary items, geometry box (compass, divider, attachments, protector)  **Computer:**  Workstation, Drafting software (latest version), output devices for printing, PPE |
| A5:  Develop drawing format & read technical drawings | You will be able to:  P1. Format the drawings according to the following specifications:   * Required scale & dimensioning * Required labeling and symbols * Specified title block (seal)   P2. Read and analyze technical drawings as per standards  P3. Communicate technical drawings as per standards | You will be able to:  K1. Describe drawing format for the particular assignment including:   * Required scale & dimensioning * Required labeling and symbols * Specified title block (seal)   K2. Describe how to read and analyze technical drawings  K3. Describe how to communicate technical drawings |  |