|  |  |  |  |
| --- | --- | --- | --- |
| Title | **Draw coordinates** | | |
| Level | **3** | **Credits** | **6** |

|  |  |
| --- | --- |
| Purpose | The competency standard is designed to explore the basics of 3D User and Z Cartesian (X, Y, Z) coordinates system. |

|  |  |
| --- | --- |
| Classification ISCED | 0611 Computer use |

|  |  |
| --- | --- |
| Available grade | Competent / Not yet competent |

|  |  |
| --- | --- |
| Modification history | N/A |

|  |  |  |
| --- | --- | --- |
| **Competency Unit** | **Performance Criteria** | **Knowledge and Understanding** |
| **D1:**  **Explain basic terminologies of Z Coordinates** | **The trainee will be able to:**  **P1.** Create 3D Cartesian coordinates against 3D POLY command by specifying start and end points.  **P2.** Demonstrate the process to track in Z direction by “OSnap” tracking or F11 key and “Polar” tracking or F10 key.  **P3.** Run “move” command to move in Z direction by specifying displacement.  **P4.** Recall 3D point filters, e.g. specifying radius of circle command.  **P5.** Create 3D spiral using “helix” command by defining number of turns, diameter and height. | **The trainee will be able to:**  **K1.** Identify different commonly known terminologies of 3D coordinates  **K2.** Describe the tracking and movement in Z direction  **K3.** List 3D point filters  **K4.** Explain “Helix” function for 3D spiral. |
| **D2:**  **Define user Coordinates System** | **The trainee will be able to:**  **P1.** Conduct orientation session of the user coordinate system (UCS) axes and the location of the current UCS origin with the execution of command “ucsicon”.  **P2.** Apply “UCS” command with multiple switches including   * Face * Named * Object | **The trainee will be able to:**  **K1.** Configure User Coordinates System (UCS) properties.  **K2.** Explain different functions to UCS. |

|  |  |  |
| --- | --- | --- |
|  | * Previous * New * View * World * X/Y/Z.   **P3.** Use the UCS toolbar.  **P4.** Demonstrate the Plan UCS procedure with “PLAN” command  **P5.** Incorporate Dynamic UCS with short keys of Ctrl+D.  **P6.** Restore a saved and named UCS with “R” key.  **P7.** Explore UCS dialog box using “UCSMAN” command  **P8.** Get the visual feedback of the model by Viewcube. | **K3.** Define the UCS toolbar.  **K4.** Explain the Plan UCS procedure with “PLAN” command.  **K5.** Define Dynamic UCS with short keys.  **K6.** Describe how to restore a saved and named UCS.  **K7.** Explain UCS dialog box  **K8.** How to Generate Viewcube. |