

CAD TECHNICIAN – MECHANICAL DESIGN AND MANUFACTURING – OCCUPATIONAL SKILLS CERTIFICATE

Top Code: 0953.40

The curriculum prepares students to read and create technical graphics and design and produce digital prototypes for the design of mechanical components within a manufacturing process. Technologies utilized in the program include parametric solid modeling CAD systems to generate 3D models, technical graphics and analysis, and to produce laser cut and 3D printed mechanical prototypes. Interpretation of engineering drawings is based on American Society of Mechanical Engineers (ASME) Y14 standards.

An Occupational Skills Certificate is awarded upon completion of all required courses with a grade of C or better.

Program Outcomes

1. Demonstrate an ability to communicate effectively using technical, graphical, oral and written formats.
2. Demonstrate appropriate mastery of industry technical graphic standards. Computer-Aided Design techniques, sustainable technology and rapid prototyping and additive production technologies in the design of components, systems or processes of mechanical design.
3. Demonstrate appropriate mastery of industry technical graphical standards in the analysis of technical graphics and digital prototypes of mechanical design components, systems or processes.
4. Collaborate effectively in teams to produce comprehensive design technology solutions to mechanical and manufacturing processes and systems.

Requirements for the Occupational Skills Certificate

Code	Title	Units
DT 008A	INTRODUCTION TO DIGITAL DESIGN AND FABRICATION	3
DT 008B	INTERMEDIATE DIGITAL DESIGN AND FABRICATION	3
DT 008C	ADVANCED SYSTEMS DESIGN AND FABRICATION	4
DT 110	SUSTAINABLE TECHNOLOGIES	3
Total Units		13