

RIGHT SKILLS NOW FOR MANUFACTURING (CNC) (RSNM), CERTIFICATE

At Dunwoody College of Technology, the Right Skills Now certificate is designed to provide fast-track, high-skilled manufacturing training in the following areas: job planning, bench work, materials, manual milling, manual turning, CNC milling, and CNC turning.

Curriculum aligns with the National Institute for Metalworking Skills (NIMS) accreditation standards.

Graduates from this program are prepared to enter the industry as entry-level manual and CNC machine tool operators.

Credits earned in the Right Skills Now certificate directly transfer into Dunwoody's Machine Tool Technology (MACH) (<https://catalog.dunwoody.edu/catalog-student-handbook/academic-programs/robotics-manufacturing/machine-tool-technology-mach-aas/>), Engineering Drafting & Design (MDES) (<https://catalog.dunwoody.edu/catalog-student-handbook/academic-programs/robotics-manufacturing/engineering-drafting-design-mdes-aas/>), or Welding & Metal Fabrication (WMET) (<https://catalog.dunwoody.edu/catalog-student-handbook/academic-programs/robotics-manufacturing/welding-metal-fabrication-wmet-aas/>) associate's degree programs.

Credential Earned: Certificate

Length of Program: 1 year (2 semesters)

Classes Offered: Evening

Available Starts: Fall Semester; Spring Semester

Accreditation: NIMS (National Institute for Metalworking Skills)

Program Outcomes

- Demonstrate required industry safety standards.
- Demonstrate proper use of manufacturing equipment.
- Initiate problem-solving skills and techniques to develop manufacturing related solutions.
- Investigate manufacturing careers.

Degree Requirements

Code	Title	Credits
General Requirements		
MATH1010	Algebra I	3
Technical Requirements		
MACH1000	Machine Shop Fundamentals	2
MACH1205	CNC Machining Theory	4
MACH1215	CNC Machining Lab	2
MDES1110	Engineering Drawings with SolidWorks	4
MDES1230	Geometric Dimensioning & Tolerances	4
Total Credits		19

Courses

Descriptions

MACH1000 | Machine Shop Fundamentals | Laboratory (2 Credits)

Manufacturing of parts through layout and bench work, includes the use of band saws, drill presses, surface grinders, manual lathes and vertical mills. Basic principles in metal-cutting technology includes threading, tapers, knurling, boring, radii cutting and milling procedures such as squaring stock, the use of rotary table and the many other milling and turning operations.

MACH1205 | CNC Machining Theory | Lecture (4 Credits)

Identification, recognition and calculations associated with CNC milling and turning operations, inspection of finished parts, and an introduction to the G & M codes used in CNC programming.

Prerequisite(s): MACH1000

MACH1215 | CNC Machining Lab | Laboratory (2 Credits)

Manufacturing of parts using CNC milling and turning processes. CNC setup and programming includes manual programming via machine control and software simulation.

Prerequisite(s): MACH1000

MDES1110 | Engineering Drawings with SolidWorks | Lecture (4 Credits)

Creation of 3D solid models, assemblies and related engineering documentation using SolidWorks. Blueprint reading and application of ASME/ANSI standards to CAD drawings.

MDES1230 | Geometric Dimensioning & Tolerances | Lecture (4 Credits)

Principles of geometric dimensioning and tolerancing in the context of engineering and manufacturing. Application of principles using coordinate measurement machines.

Prerequisite(s): MDES1110

MATH1010 | Algebra I | Lecture (3 Credits)

Foundational algebra is applied in the context of geometry and trigonometry. Topics include rules of exponents, simplifying expressions, solving equations, computing measurements of two and three dimensional shapes, solving right triangles, and solving oblique triangles.

General Education: Mathematics