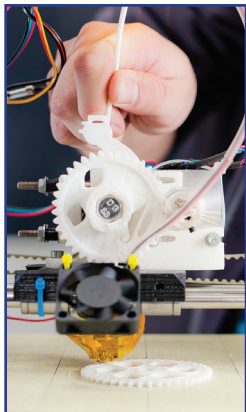


3D Digital Design & Manufacturing Technology

Certificate of Proficiency

Additive Manufacturing



Program Description

This program is for those who wish to acquire skills in the operations of Coordinate Measuring Machines (CMM), Computer Numerically Controlled (CNC), 3D Printing (3DP)/Rapid Prototyping (RP)/Additive Manufacturing (AM) techniques, and the use of Computer Aided Drafting (CAD)/Computer Aided Manufacturing (CAM) software in order to gain entry-level employment in varying operations involved in manufacturing with an emphasis on **Additive Manufacturing**.

Audience

Individuals interested in pursuing a career in additive and subtractive manufacturing with a focus in 3D design and 3D printing principles.

Program Prerequisite(s)

- High school diploma or GED
- COMPASS assessment for mathematics and English may be required

Topics Covered

- Background knowledge in the use of 3DP/RP/AM and CNC/CMM in the field of manufacturing
- Creation and development of 2D and 3D digital designs using CAD/CAM software
- Product design, development, and improvement for additive manufacturing
- Preparation for the nationally recognized Society of Manufacturing Engineer's Additive Manufacturing Certificate exam
- Internship opportunities based on eligibility

Required Courses

	Course Name	Course Number	Credits	
One-Year Certificate of Proficiency	Digital Design & Product Innovation Short-Term Certificate			
	Short-Term Certificate 1	AutoCAD Drawings	MET 1230	3
		Machine Tools and Manufacturing Processes	MET 1240	3
		Introduction to Additive Manufacturing	MET 1250	3
		Product Ideation & Design	MET 1260	3
		Technology Orientation	MET 1100	2
		Fundamentals of Engineering Economics	MET 2421	2
		Total Credits	16	
	Digital Manufacturing & Product Launch Short-Term Certificate			
	Short-Term Certificate 2	3D Solid Modeling	MET 2601	3
		3D Printing & Scanning for Reverse Engineering, & Inspection	MET 2150	3
		Engineering Materials and Metallurgy	MET 1300	3
		Additive Manufacturing Internship	MET 2940	1
		CNC Programming and Operation	MET 1400	3
		Capstone: Project Based/Team Oriented	MET 2190	3
		Total Credits	16	
Total Credits for One-Year Certificate of Proficiency			32	

Credits earned in this program can be used toward the completion of an Associate of Applied Science (AAS) degree in Manufacturing Industrial Engineering Technology.

Upon Completion

Earn two short-term 3D/AM certificates that leads to a One-Year Certificate of Proficiency in 3D Digital Design & Manufacturing Technology.

Financial Aid

May be available for those who qualify. Contact the Student Financial Aid & Scholarships Office for more information at 216-987-0272.

For more information:

Email:
3Dmfg@tri-c.edu
Call:
216-987-2769
Visit:
tri-c.edu/3Dmfg

Cuyahoga Community College - Workforce and Economic Development Division
3D Digital Design & Manufacturing Technology Program funded through a U.S. Department of Labor (DOL) Employment, Training and Administrative (ETA) grant.