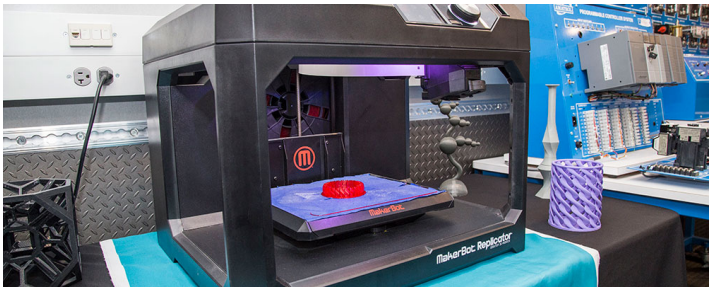
DIGITAL MANUFACTURING AND PRODUCT LAUNCH, SHORT-TERM CERTIFICATE



This short-term certificate is one of the two programs, which, upon completion, lead to the award of certificate of proficiency in additive manufacturing. This program is intended for students who wish to gain employment in modern manufacturing enterprises, involving but not limited to additive manufacturing. The skills and concepts taught also prepare students to take the nationally recognized Society of Manufacturing Engineering (SME)-Additive Manufacturing Consortium's Certification in Additive Manufacturing. This is a stackable certificate program that requires completion of the short-term certificate in Digital Design & Product Innovation prior to starting this program.

Program contact: Learn more

This certificate will be automatically awarded when the certificate requirements are completed. If you do not want to receive the certificate, please notify the Office of the Registrar at RegistrarOffice@tri-c.edu.

Learn more about how certificate credits apply to the related degree and about related training programs.

Program Admissions Requirements

- Contact program coordinator for application information.
- High School Diploma/GED
- ENG-0995 Applied College Literacies or higher, or appropriate score on English Placement Test.
- MATH-0965 Intermediate Algebra or higher, or appropriate score on Math Placement Test.

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes:

1. Communicate effectively and efficiently with diverse individuals and teams, all levels of employees, customers, and suppliers by means of verbal, written (memos, reports, emails, etc.), graphics, symbols, and effective listening skills and using appropriate technology.
2. Complete tasks and projects on schedule through the effective use of time management, appropriate math skills, and teamwork that fosters inclusion, synergized efforts in problems identification, and troubleshooting for successful resolution of problems towards the achievement of set goals and objectives.
3. Apply quality systems, principles, concepts and utilizing appropriate math, measurement and statistical tools and technology to improve processes, product quality, and to enhance productivity.
4. Incorporate safety awareness, principles and practices in every aspect of work and as a way of life, including machine safety, environmental safety, chemical safety, and personal/employee protection.
5. Apply knowledge of machines' principles and operation, tools and materials to select operations' parameters in order to program, setup, and operate production manufacturing equipment, and also to be able to troubleshoot and diagnose equipment used in additive manufacturing technologies.
6. Apply the knowledge of material science, machine tolerances, blueprint/schematics, and hands on skills in Additive Manufacturing equipment for the development of designed parts and incorporating accepted industry methods.
7. Apply the knowledge of the principles of drafting and the communication of ideas, designs and visualization skills as the language of the engineering field, including the creation and interpretation of drawings using proper dimensioning and tolerance for size and geometry, and use of 3D Modeling drawing programs to incorporate proper industry acceptable standards and conventions.
8. Apply the basic principles of equipment maintenance, troubleshooting and problem solving techniques to maintain industrial machines that ensures the production of quality products.

Suggested Semester Sequence

First Semester		**Credit Hours**
MET-1300	Engineering Materials and Metallurgy	3
MET-2151	3D Digital Design & Printing	3
MET-2160	3D Scanning, Reverse Engineering, and Quality Inspection	3
	Credit Hours	9
Second Semester		
MET-2941	Additive Manufacturing Internship	1-4
MET-2990	Product Development and Manufacture	3
MET-XXXX	Elective	3
	Credit Hours	7-10
	Total Credit Hours	16-19