Additive Manufacturing Design Technology, A.A.S.

The Additive Manufacturing Design Technology (AMDT) degree path will augment students' learning by coupling theory-based instruction with hands-on applications using current software. The AMDT path software includes, but is not limited to, SOLIDWORKS, Insight, Materialise, NetFabb, Generative Design, Geomagic Design X, GOM inspect, and AutoCad. The student will practice 3D printing techniques with hands-on a large polymer and Metal AM system. AMDT students will obtain the skills by taking classes in innovation design, formal engineering design process, advanced critical thinking, project management GD & T option, reverse engineering, 3D modeling, printing and scanning, and converting point cloud data to solids and inspections. Additive Manufacturing Design Technology will undoubtedly revolutionize manufacturing and usher in a new wave of innovation.

Portfolio class offers students training in professionalism; instruction includes resume building, networking in an internet world, interviews, etc. All students produce an electronic website portfolio for marketing their skill set.

Graduates will be qualified to seek positions in the following fields: Additive Manufacturing Technician, 3D Printing Operator, 3D Designer, 3D Solid Modeler, Manufacturing Technician, Prototyping Technician, Production Technician, Reverse Engineering Technician, SOLIDWORKS Designer, CAD Technician, Part Inspection Technician CAD/3D Design Drafter, Detailer, Engineering Design Drafter, Engineering Drawing Checker, and Instructor. The Advanced Manufacturing (ADM) core classes will enhance the students' skill set, enabling them to obtain advanced positions in this field of study.

*The Additive Manufacturing path student should take ADM 108, ADM 112, and DDT 111 in their first semester.

* CHM 257 is required for your science. *Contact Nina Bullock, DDT lead faculty instructor, 256-306-2813 or nina.bullock@calhoun.edu, in your first or second semester for a list of approved electives and a map for your course of study.

Subject: Advanced Manufacturing
Program Code:
AAS-ADMA-DDAD
CIP:
15.0613
Type: A.A.S.

GENERAL EDUCATION CORE REQUIREMENTS

Item #	Title	Credits
ENG 101	English Composition I	3
	MTH 103 or higher	3-4
	Humanities/Fine Arts Elective (Excluding Speech and Foreign Language)	3
	Social & Behavioral Science Electives	3
CHM 257	Introduction to Material Science	4

ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS

Item #	Title	Credits
ADM 101	Precision Measurement	3
ADM 104	Introduction to Thermal/Electrical Principles	3
ADM 105	Fluid Systems	3
ADM 106	Quality Control Concepts	3
ADM 107	CAD Concepts	3
ADM 111	Manufacturing Safety Practices	3

ADDITIVE MANUFACTURING REQUIREMENTS

Item #	Title	Credits
ADM 108	Introduction to 3D Modeling	3
ADM 112	Orientation to Additive Manufacturing	1
ADM 114	Design Innovation	3
DDT 111	Fundamentals of Drafting and Design Technology	3
ADM 161	3D Specialized Software Techniques (2T, 3M)	3
ADM 162	Additive Manufacturing Processes - Polymers	3
ADM 164	Additive Manufacturing Processes - Metals	3
ADM 255	Application of Design (Capstone)	3
DDT 260	Portfolio	3
ADM 261	Reverse Engineering	3
	DDT/ADM Electives (4-6 credits)	4-6
	Total credits:	**66-69**