



Date 7/2023

Rev. # 1

Applying Additive Manufacturing to Your Manufacturing

Onsite – 3 Days, 8 Hours/Day – Optimum Class Size: 6-12 Participants

Training Description

The goal of the class is to find opportunities for additive manufacturing to improve your business. For some companies, it's printing prototypes, for others it's printing tooling, and others even use it for production parts. Each company is different, so our approach begins with learning about your business and asking questions.

Applying Additive Manufacturing to Your Manufacturing is delivered both onsite and offsite. It is intended for all levels of the company. Ideally, at least one of the participants is responsible for engineering design and will be able to design and modify parts during the course.

Training Objective

The goal is to understand the pros and cons of the many available printing methods, and how to match them to the application. This will be done through real world examples as well as based on opportunities that currently exist in the company's manufacturing.

Skill Attainment

- Intro to Additive – The history, current status, and future of additive manufacturing. Where we were, where we are, where we are going, and why this is important to your business
- Technology overview to the most common additive technologies and their advantages and disadvantages
- Common materials overview – The most readily available materials, their properties, and uses.
- Most common applications – Prototyping, Tooling & Fixturing, End Use Parts
- Application training – Sample parts will be presented, and their features, orientations, and uses will be discussed
- Exposure to printing software and how to import and slice STL files
- How to quickly analyze CAD models for 3D printing efficiency
- Introduction to Design for Additive Manufacturing (DfAM)
- Understanding the Design Constraints – Overview of the specific rules and guidelines of designing for additive
- Understand the organization's goals and pain points
- Identify applications on the manufacturing floor – Discussion of where to look for additive opportunities

Agenda

- Day 1 is on-site at your facility where look for applications that would benefit from 3D printing and then take a few examples from concept to prototype design. Before the next session, the customer will develop a few of the ideas, and we will print them using several different materials and technologies.
- Day 2 is off-site at the instructors additive printing facility where participants will learn from the printed parts and see multiple kinds of printers in operation.