Additive Manufacturing Training and Workforce Development Programs

Our training sessions are designed for military, government, educational institutions, and private businesses. They provide a significant focus on the use of additive manufacturing (AM, also known as 3D printing) and its applications. Only state-of-the-art equipment and software are utilized. The content is well-balanced, consisting of hands-on exercises and lectures.

**AM LECTURE**
- **Duration:** 1 – 2 hours
- **Class size:** 50+
- **Location:** On site or at UTEP
- **Trainer:** AM expert
- **Printers:** None
- **Style:** 100% Lecture
- **Topics:**
  - Additive manufacturing technology overview
  - AM fundamentals and limitations

**INTRODUCTION TO DESKTOP 3D PRINTING**
- **Duration:** 1 Day
- **Class size:** 10 – 20 trainees
- **Location:** On site or at UTEP
- **Trainers:** AM expert + 1 expert assistant
- **Printers:** Desktop
- **Style:** 70% hands-on, 30% lecture
- **Topics:**
  - Additive manufacturing technology overview
  - AM fundamentals and limitations
  - Introduction to build file preparation software
  - File preparation and use of support structures
  - Basic operation of a desktop 3D printer

**LEVEL 1 TRAINING: INTRO TO ADDITIVE MANUFACTURING (AM)**
- **Our most popular program**
- **Duration:** 3 – 5 days
- **Class size:** 10 – 20 trainees
- **Location:** On site (preferred) or UTEP
- **Trainers:** AM expert + 1 or 2 expert assistants (based on class size)
- **Printers:** Desktop
- **Style:** 70% hands-on, 30% lecture
- **Topics:**
  - Additive manufacturing technology overview
  - AM fundamentals and limitations
  - In-depth desktop 3D printer operation
  - Introduction to computer-aided design (CAD)
  - Introduction to build file preparation software
  - AM process chain
    - (design, process parameters, post-processing, and inspection)
  - Applications of AM
  - Equipment maintenance and troubleshooting
  - Advances in AM research
  - Competitive capstone project
LEVEL II TRAINING: ADVANCED ADDITIVE MANUFACTURING (AM)
Duration: 2 weeks
Class size: 10 - 20 trainees
Location: UTEP
Trainer: AM expert + 1 or 2 expert assistants (based on class size)
Printers: Desktop & industrial
Style: 70% hands-on, 30% lecture
Topics:
- Review of Level I topics
- Advanced CAD
- FEA stress analysis
- 3D scanning and reverse engineering
- Design optimization
- AM material properties and safety
- Exposure to industry-grade AM equipment
- Competitive hands-on capstone projects using reverse engineering, simulation, and 3D printing

LEVEL III TRAINING: CUSTOMIZED TECHNOLOGY-SPECIFIC OPERATIONS
Duration: Varies (1 - 2 weeks)
Class size: 1 - 4 trainees
Location: On site (if machine is available) or UTEP
Trainer: AM expert + expert assistants (as required)
Machines: 60+ available (printers, testing, and other)
Style: Over 90% hands-on
Topics:
- Advanced operation and maintenance
- Material handling
- Material testing and characterization
- In situ monitoring and process control
- Custom operation (functional products)

FOR MORE INFORMATION, PLEASE CONTACT:
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