

**PD783**  
**Designing for Metal-Based Additive Manufacturing**

**Day 1**

- **Introduction to AM with Metals**
  - Binder Jetting
  - Directed Energy Deposition
  - Powder Bed Fusion
  - Metallic Material Systems
  - Economics of AM
  - Introduction to Team Case Study
  
- **Digital Workflow: Art to Part**
  - Software Toolchain
  - AM Modeling and Simulation
  - Build Orientation and Layout
  - Post-Processing Considerations
  
- **Design for AM – Part 1**
  - Identifying Parts for AM
  - Hands-on Design Challenge
  - Introduction to Individual Design Challenge
  - Design Challenge – Working Session
  - Direct Part Replacement
  
- **Day 1 Summary & Wrap-up**

**Day 2**

- **Design for AM – Part 2**
  - Lattice Structures
  - Topology Optimization
  
- **New Business Models**
  - Mass Customization
  - Supply Chain Implications
  - Open Discussion
  
- **Hands-on Design Challenge – Testing & Results**
  - Team Case Study
  - Team Case Study – Working Session
  - Team Case Study Presentations
  
- **Ongoing Research and Future Directions**
  
- **Day 2 Summary & Wrap-up**