



AM211

Replicate Case Study Course

Module 1: Introduction and Considerations

Lesson 1: Introduction

- Welcome to the AM211 Replicate Case Study Course
- Course Outcomes
- Course Orientation and Tips
- When to Replicate for Additive Manufacturing
- Part Chosen for Replication

Lesson 2: Considerations and Challenges

- Considerations
- Why Powder Bed?
- Alternative AM Methods
- Strength and Grain Direction
- Advanced Manufacturing Flight Check™: 3D or Conventional?
- Candidate for Replication Assignment

Module 2: Process Planning to Replicate the Bracket

Lesson 3: AM Workflow for Replicate

- AM Workflow for Replicate

Lesson 4: Acquiring the file for the bracket

- Acquiring the File

Module 3: Design to Replicate the Bracket

Lesson 5: Advantages and Disadvantages to AM

- Advantages of Replicating with AM
- Disadvantages of Replicating with AM

Module 4: Print and Post-Process

Lesson 6: Printing the Bracket

- Orientation
- Other Design Techniques
- Advanced Manufacturing Flight Check™: Things to Consider Before Printing
- Everyday Object Replicate Assignment

Lesson 7: Post-Processing for the Bracket



Heat Treatment and Part Removal
Surface treatment
Certification and Wrap-Up
Final Assignment Part A and B