Core Certification Competencies

• Introduction to Aerospace
  - Regulations and Controls
  - Clean Room, Contamination and FOD
  - Ethics
  - Quality Assurance and Quality Control

• Aerospace Safety
  - Toxic and Hazardous Substances
  - Personal Protection Equipment
  - Hazardous Materials
  - Emergency Plans and Fire Prevention
  - Platforms
  - Occupational Health and Environment
  - Walking Surfaces

• Applied Mechanics
  - Machine Shop Safety
  - Non-Cutting Hand Tools
  - Cutting Hand Tools
  - Drill Presses, Twist Drills, Drilling Speeds and Feeds, Drilling Holes
  - Basic Measurement
  - Basic Calculations (Metric to Standard, Ratios, Volume, Area, Dimensions)
  - Micrometers
  - Calipers
  - Hardware and Materials Identification
  - Blueprint Reading and Interpretation
  - Interpret Technical Drawings and Schematics

• Basic Electricity
  - Electric Safety
  - Metric Notation
  - Atomic Structure
  - Resistors
  - Switches
  - Schematic Reading
  - AC/DC Circuits
  - Theory
  - Laws

• Materials and Processes I & II
  - Metallurgy
  - Metallurgical Processes
  - Mechanical Behavior
  - Conventional Mechanical Testing
  - Corrosion
  - Corrosion Forms, Causes, Prevention
  - Corrosion Control
  - Non-Metallic Materials
  - Composite Materials
- Structural Characteristics
- Solid Core Structures, Molds, Moldless Wet Lay-up Techniques
- Hollow Structures and Mold Making
- Vacuum Bagging

- Test and Measurements
  - Inspection Requirements and Planning
  - Accuracy, Precision and Tolerances
  - Mechanical Measuring Inspection
  - Mechanical Surface Plate Inspection
  - Electrical /Electronic Measurements
  - Electrical Pressure/Flow/Temperature Measurement
  - Force/Strain/Torque/Vibration Measurement
  - Non-Destructive Examination
  - Surface Flaw Inspection
  - Delamination Inspection
  - Electromagnetic Techniques
  - Radiographic Techniques