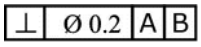
Syllabus for the GD&T Basics Fundamentals Course

Section 1: Introduction

- Course Introduction – Why This Course is Different
- What is GD&T?
- Terminology & Basic Rules

Section 2: Features and Rules of GD&T

- Intro to Features and Material Conditions
- Rule #1 of GD&T (Envelope Principle)
- Maximum Material Condition Ⓜ
- Least Material Condition Ⓛ
- Regardless of Feature's Size & Rule #2
- The Feature Control Frame 

Section 3: Datums Control

- Intro to Datums
- Datum Reference Frame
- Primary Datum Controls
- Datum Targets
- Intro to MMB and LMB

Section 4: Adding GD&T to a Design

- SLOF for Drawings (Size, Location, Orientation & Form)
- Choosing Datums
- Virtual Condition Calculations

Section 5: Form Tolerances

- Straightness (Surface)
- Straightness (Derived Median Line) 
- Flatness (Surface)
- Flatness (Derived Median Plane) 
- Circularity 
- Cylindricity 

Section 6: Orientation Tolerances

- Parallelism (Surface) 
- Parallelism (Axis)
- Perpendicularity (Surface) 
- Perpendicularity (Axis)
- Angularity (Surface and Axis) 

Section 7: Profile Tolerances

- Profile of a Surface - Basics 
- Profile In-Depth (Modifiers)
- Profile of a Line 

Section 8: Location Tolerances

- True Position – Basics 
- Position – In-Depth
- Intro to Functional Position Gauging
- Why Use Position Over Coordinate Dimensions
- Concentricity 
- Symmetry 

Section 9: Runout Tolerances

- Runout/Circular Runout 
- Total Runout