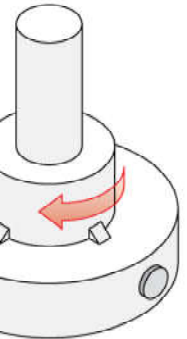


Syllabus for the GD&T Basics Fundamentals Course

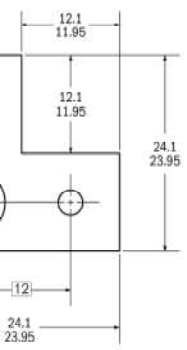
Section 1: Introduction

- 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 (M)
- Least Material Condition (L)
- Regardless of Feature's Size & Rule #2
- The Feature Control Frame $\perp \text{ } \varnothing 0.2 \text{ } | \text{ } A \text{ } | \text{ } B \text{ }$



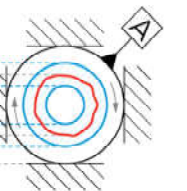
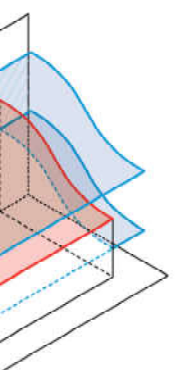
Section 3: Datums Control

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



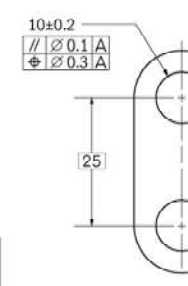
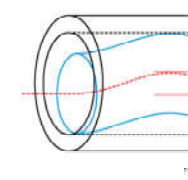
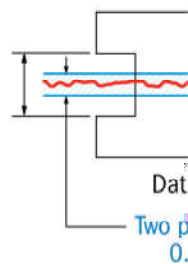
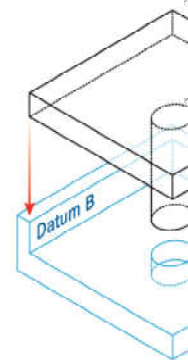
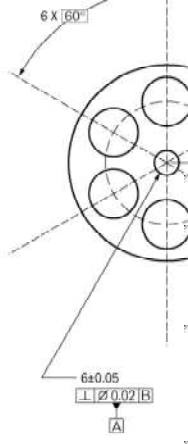
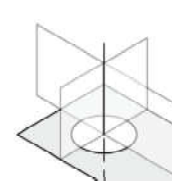
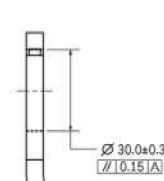
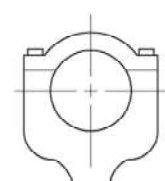
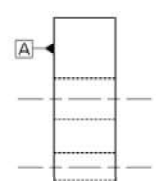
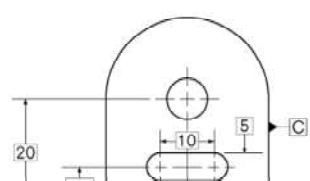
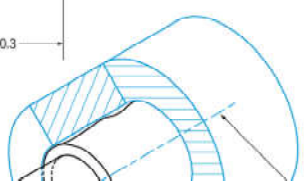
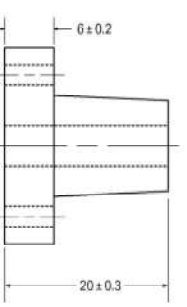
Section 4: Adding GD&T to a Design

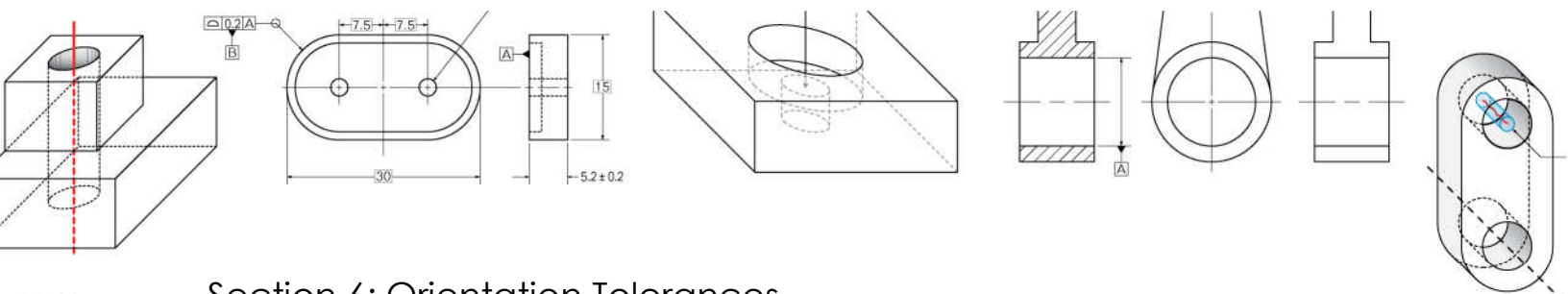
- SLOF for Drawings (Size, Location, Orientation & Form)
- Choosing Datums
- Virtual Condition Calculations



Section 5: Form Tolerances

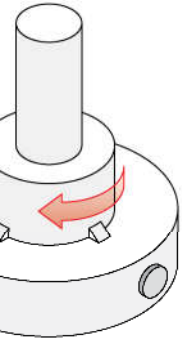
- Straightness (Surface) —
- Straightness (Derived Median Line)
- Flatness (Surface) ▭
- Flatness (Derived Median Plane)
- Circularity ○
- Cylindricity ∕





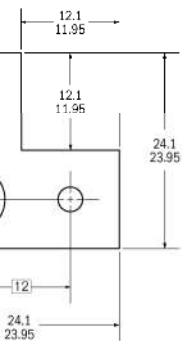
Section 6: Orientation Tolerances

- Parallelism (Surface) \parallel
- Parallelism (Axis) \parallel
- Perpendicularity (Surface) \perp
- Perpendicularity (Axis) \perp
- Angularity (Surface and Axis) \sphericalangle



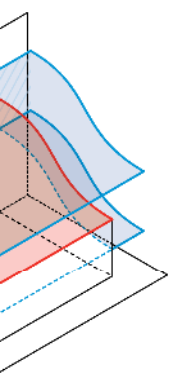
Section 7: Profile Tolerances

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



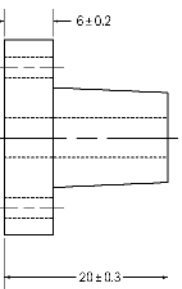
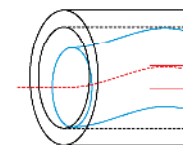
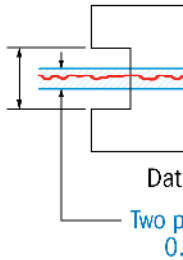
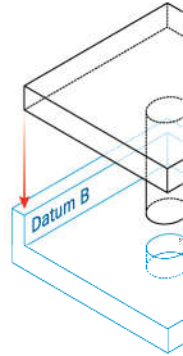
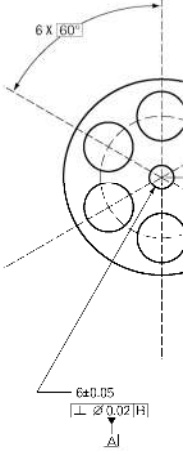
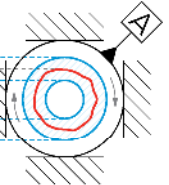
Section 8: Location Tolerances

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



Section 9: Runout Tolerances

- Runout/Circular Runout \nearrow
- Total Runout \nearrow



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