Agenda Today – Manufacturing Project

- Drawing feedback
- How to get drawings signed
- Signing up for machine shop times
- Suggested measurements to make once your part is complete

Drawing Feedback

- Recall grading breakdown for the drawings:
  - Title Block and Notes (20)
  - Orthographic and Isometric Views (10)
  - Dimensions (40)
  - Features / Machinable followed guidelines (20)
  - Overall Neatness (10)
- Common missing elements of the drawings:
  - Incomplete dimensions of the part and/or parts cannot be made as dimensioned.
  - Dimensioning to centerlines, fillets leaving object lines, dim lines intersecting part, etc.
  - Several missing ordinate dimensioning

How to Get Drawings Approved

- Some drawing already signed – sign up for a shop time starting today.
- Revise drawings based on the comments written on your draft
- Meet a TA, Dr. Glancey or Dr. Keefe to get revised drawing signed
  - Bring a hardcopy of the revised drawing.
  - **Bring your original draft drawing with the written comments and grades.**
  - Final drawing grade will be based on your revised drawing.
- Office Hours for Revised Drawing Signing
  - Glancey: Friday, 9/7: 2 to 4p in 315 SPL
  - TA's: Friday, 9/7: 9-10am in 103 SPL
  - Shop Open House: Friday, 9/7: 11a-2p in 104 SPL

Signing up for Machine Shop Times

- Once you have an approved drawing, you can signup at for a shop time using the Google doc link below
- You will receive a text the night before your shop time as a reminder.
- If you miss your time, there may not be additional time slots available.
- Remember the grading incentive for signing up early
- https://docs.google.com/spreadsheets/d/1nPVJ4gDffhLM51_r2zv6axFnJeVRant52DNXesNBeBY/edit?usp=sharing
- Link will be sent via Canvas announcement by about 9:30am this morning

Requirements for Your Shop Time

- Signed drawing – 2 copies
- Screen shot of Offline Prototrak Programming Exercise
  - Office Hours for Programming Help: Friday, 9/7, 2-4p in 103 Spencer
- Appropriate Attire
  - Closed toe shoes
  - No shorts
  - Long hair pulled back

Measurements for MEEG301 Manufacturing Report

Procedure for simple verification of dimensions

- Using drawing dimension and tolerance find the maximum and minimum acceptable dimension
- Measure dimension
- If measurement (or average of measurements) is within the minimum and maximum acceptable dimensions the measurement (or average) is acceptable

Procedure for statistical verification of dimensions

- Take 5 unique measurements per dimension
- Find average-μ (AVERAGE function on excel) and standard deviation-σ (STDEV function) of the 5 measurements
- Calculate the statistical maximum (μ+3σ) and statistical minimum (μ-3σ)
- If the statistical maximum and minimum fit within the maximum and minimum acceptable dimensions (found in the previous slide) the measurement is statistically acceptable

Dimensions to verify simply and statistically

- Simple verification
  - All dimensions on the part
- Statistical verification
  - Thickness
  - Height and width of part
  - One depth dimension
  - One diameter dimension
  - One interior dimension