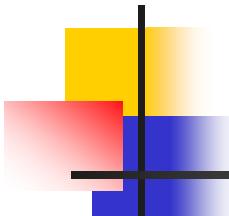


# 16.810 Engineering Design and Rapid Prototyping

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- Acrobatic Bike Design – Team 8
  - Chris Graff, Georgene Hilb
- Market Priorities:
  - Structural Performance and mass
  - Accept cost

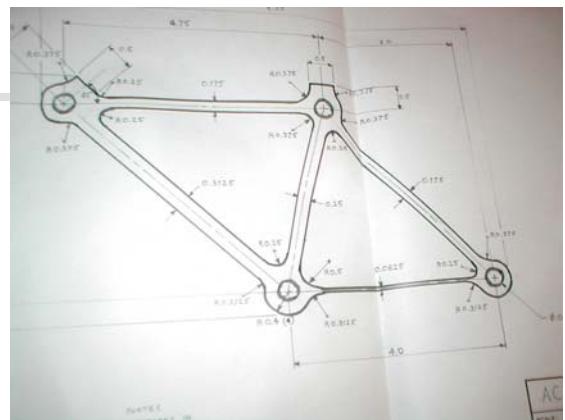
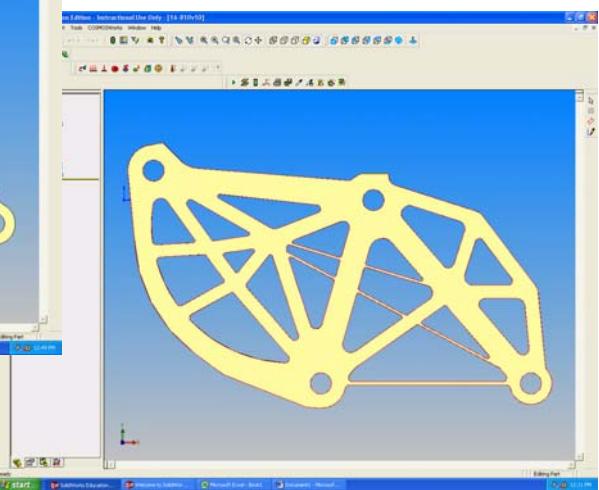
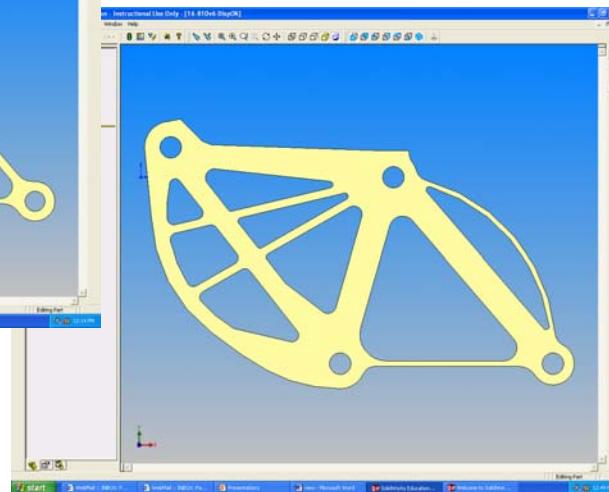
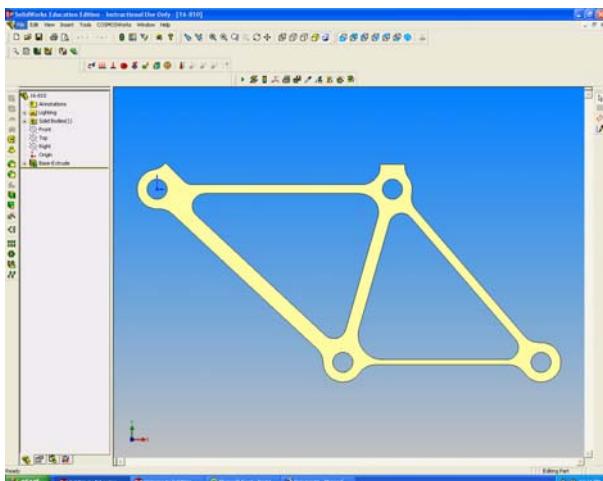


# Requirements

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- Loading:  $F_1 = F_2 = F_3 = 100$  lbs
- Performance (Constrain):
  - 0.063mm Fork Deflection, 0.01mm Saddle Deflection
  - 632.2 Hz Natural Frequency
- Mass (Optimize):
  - 0.40 lbs (Original: 0.16 lbs)
- Cost (Accept):
  - Unlimited (Original: \$10.40)

# Design Evolution



# Analysis, Testing, Final Design

## ■ Table of Results

