

Introduction to SolidWorks

24-370 - Spring 2011
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Announcements

- Skill survey results
 - High variability, but some outliers (FBD, ode45)
- Questions on homework?
- Project 1 assigned today
 - Detailed description via email, web
 - Design part geometry under constraints
 - Build and test parts
 - Minimum mass contest!
 - Part designs due Monday Feb 7th, Reports 9th

SolidWorks

- Computer-Aided Design (CAD) software
- Design 3D parts and assemblies
 - Design part geometry
 - Put stuff together
- Analyze
 - Stress: static, fatigue, buckling...
 - Other: dynamics, thermal
- Communicate designs
 - Create engineering drawings
 - Export parts for manufacture

SolidWorks Demonstration

- Follow along as we go
- Tutorials are awesome!
- Build on experience of the experts
 - My habits are a subset
 - Other experienced people: chime in!
- The American's unit dilemma

Today's SolidWorks Topics

- Creating parts
 - Sketching
 - Sketch-based features
 - Other features
- Creating assemblies
 - Mating
- Creating engineering drawings
 - Adding views
 - Dimensions-lite

Today's SolidWorks Demo Parts

- Create a shaft
- Create a bearing (to catalog spec)
- Create a bearing support block
- Assemble parts
- Create Engineering Drawing of Support Block