ME 1403 Engineering Practice & Graphics

Lecture 14

Chapter-9

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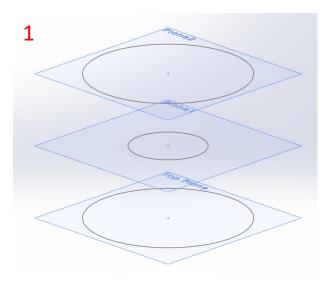
Announcement! Quiz 3 (Next Class!)

- Topics:
 - Wrap
 - Mirror
 - Pattern
 - Rib
 - Vary Sketch
- Time
 - 20 minutes

Outline

- Tools / Methods
 - Loft
 - Helix Spring / Spiral
 - 3D Sketch
 - Instant 3D
 - Drag & Drop Copy
- Practice
 - Tutorial 2 (Will be Graded)
 - Tutorial 3 (Will be Graded)
 - Exercise 2 (Will be Graded)

Loft



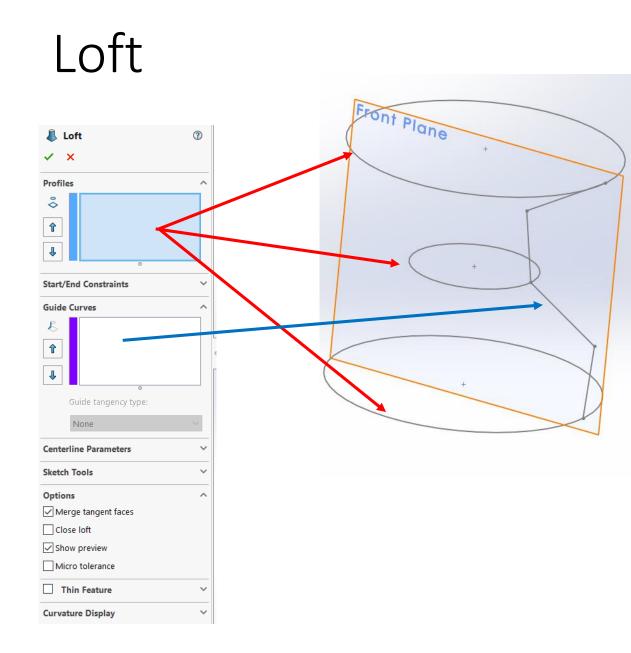
Create 3 circles of different radius in 3 different planes

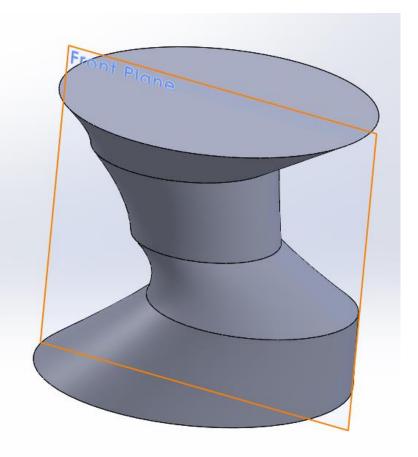
Create a path on the perpendicular (front) plane

Front Plane

2

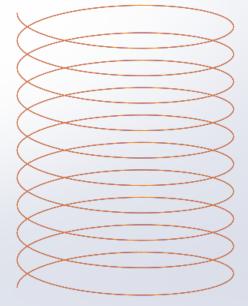
| | Front PI | ane + | | | | | | | |
|-------|---------------|---------------|----------|------------------------|--|------------------|----------|-----------------------------|---|
| | ر Extruded | 8 Revolved | lofted | Boss/Base Boss/Base | Difference for the second seco | 🔞 Hole Wizard | Revolved | 🕼 Swept Cut 🗊 Lofted Cut | |
| plane | Boss/Base | | | lary Boss/Base | Cut | * | | 🖄 Boundary Cu | t |
| | Features | Sketch | Evaluate | DimXpert | SOLIDWO | RKS Add-Ins | SOLIDV | VORKS MBD | |



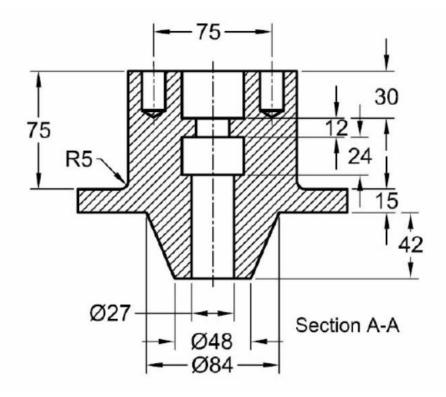


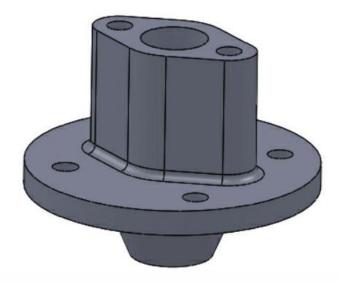
| Helix & Spiral | Definition of the spiral will be discussed during class | ~ | Helix/Spiral | ° |
|---|---|-------------|---|---|
| 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | <u>P</u> ar | ameters © Constant pitch O Variable pitch Pitch: 10.00mm Reverse direction Revolutions: 10 Start angle: 180.00deg © Clockwise | |
| SolidWORKS File Edit View Insert Tools Window Help Image: Constraint of the second | Cut Cut Cut Fillet Linear Pattern Draft Mirror Mirror Mirror | enc Cu | Counterclockwise Part2 * Instant3D Project Curve Composite Curve Curve Through XYZ Points Curve Through Reference Points Helix and Spiral | |

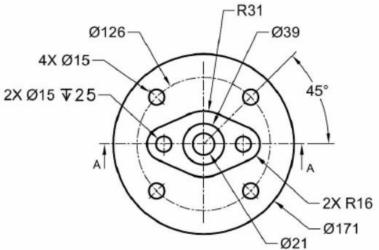
Select the circle and click on Helix and Spiral.



Tutorial 2(Will be Graded)

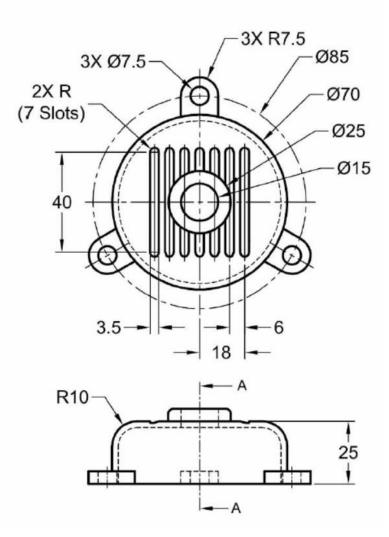




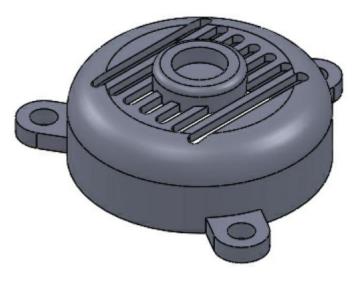


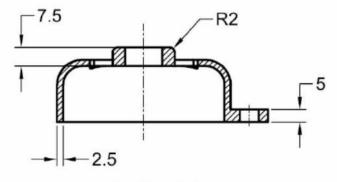
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Tutorial 3(Will be Graded)



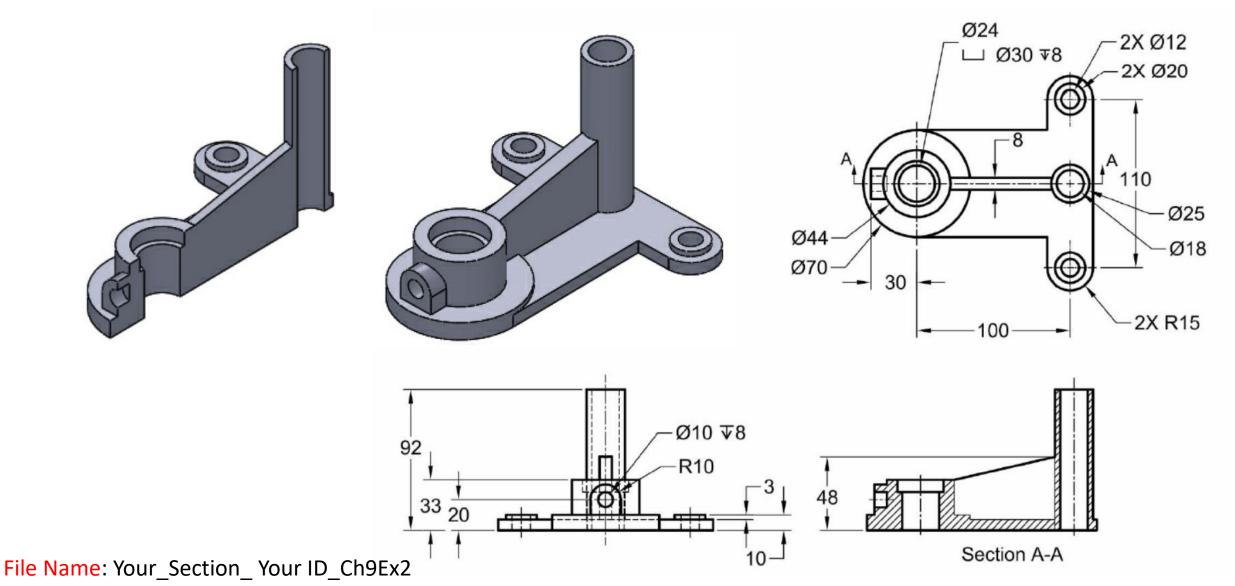
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Section A-A

Exercise 2(Will be Graded)



Submission Rules

- Homework's are due at the Sunday 11.59 P.M. of the following week (More Discussion on next class).
- Quiz's will be taken.
- Submit everything via **<u>Blackboard</u>**.
- Copying your assignments are prohibited. If you do so, you and the individual you copied from will receive a grade zero, plus both of you will be referred for actions as described in the university's policy for academic dishonesty. (Read Section 203 of the Student Code of Conduct 2013-2013 UTSA Information Bulletin.)