Autodesk Inventor Tutorials
Jim Shahan (jcshahan@iastate.edu)

- This is a set of Tutorials that cover Basic use of the Software
  - Level I: The most basic of features needed to do modeling and drawing of parts and assemblies. Also includes some things that I wish I had learned the first time I worked with the software.
  - Level II: Additional details, good to understand prior to doing advanced work
- The material presented here is my notes on the related subject.
  - It is subject to change
  - It is not intended to be fully polished material
  - Utilizes basic shapes / widgets
  - Emphasis is on understanding the software, not complicated geometry
- I put this material together to help students that want additional practice from tutorials.
- This material helps the students focus on what I think are the important fundamentals relating to:
  - Parts: Modeling and Drawing
  - Assemblies: Modeling and Drawing
  - Presentations: Exploded views and animations.
Level I – Intro

1. **Setup (Quick Reference)**
   *Key Topics: Project folders and settings, Screen Layout, Additional Information*

2. Modeling - **Part Models (Chronicle)**
   *Key Topics: Templates (Units, Standards), Application Options, Viewing tools, Model Feature – Extrude (Join and Cut), Sketches – Dimensions and Constraints (Horizontal, Vertical, Tangent)*

3. Modeling - **Assembly Models (Chronicle)**
   *Key Topics: Templates, Base Component (Ground, Re-orient) Components (Placing, Free move and Rotate, Constraints (Applied to Faces and Edges)*

4. Modeling - **Presentation Models (Chronicle)**
   *Key Topics: Templates, Creating Views, Tweaks, Animation*

5. Drawing - **Borders and Titleblocks**
   *Key Topics: Templates, Formats, Borders, Titleblocks, Sheets, iProperties*

6. Drawing - **Part Drawings (Chronicle)**
   *Key Topics: Templates, Base View, Projected Views (including Isometric), Views (Editing, Moving, and Deleting), Lines (Hidden and Tangent Edges), Annotation (Centers and Dimensions), Edit dimension text, Edit the Default standard (Line Scale)*

7. Drawing - **Assembly Drawings (Chronicle)**
   *Key Topics: Views – Assembled Orthographic and Exploded Isometric, View Editing and moving, Adjusting Hidden line and tangent edge visibility, Center lines and marks, editing the default standard (Line Scale), Parts List and Balloons*

Level II – Additional Details

1. Modeling:
   a. Part Models (including geometric analysis)
      i. Sketch Details - Part 1: *(Chronicle)*
         - Coincident, Horizontal, Vertical
         - Parallel, Perpendicular, Equal
      ii. Sketch Details – Part 2: *(Chronicle)*
         - Concentric, Tangent
         - Symmetric, Co-linear
   b. **Assembly Models (Chronicle)**
   c. Presentation Modeling II - **Part II (Chronicle) | Part III : (Chronicle)**

2. Drawing
   a. Setup II: **Drawing – Templates, Logos**

Additional Examples / Applications

1. Standard Part Drawings / views
   a. **Other Views** – (Section, Auxiliary, Detail) *(Chronicle)*
   b. **Dimensioned Views** (Chronicles: Centers, Part I, Part II)

2. Standard Features and Weldments *(In development)*
   a. Assembly Model
   b. Presentation Modeling

3. Top Down – Design Parts in Assemblies: **Notes** (Links to chronicles in the notes)