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| Week | Date | Topics | Comments |
| 1 | 10Sept 2017  -  14Sept 2017 | Manual:**Introduction to Engineering Drawing**  Drawing Instruments, Alphabet of Lines, Text and Numbering, Dimensioning and Scaling  CAD: SolidWorks Basics and User Interface  Keyboard Shortcuts, Feature Manager Design Tree, Property Manager, Task Pane, Mouse Buttons, Options | Course Preparation |
| 2 | 17Sept 2016  -  21Sept 2016 | Manual:**Geometry**  Lines, Arcs, Circles, Ellipses, Parabola  CAD: 2D Sketching  Sketch Entities, Basic Sketching, Sketch Relations, Dimensions | Assignment1 |
| 3 | 24Sept 2016  -  28Sept 2016 | Manual: **Geometry**  CAD: Basic Part Modeling  Feature, Plane, Extrusion, Sketch, Boss, Cut, Fillets, Editing Tools | Assignment2 |
| 4 | 1 Okt 2017  -  5 okt 2017 | Manual: **Orthographic**  3rd Angle Projection  CAD: Symmetry In Sketch  Mid Plane Extrusion, Centerline, Draft Toggle | Assignment 3 |
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| ***Exercise 1*** |
| 5 | 8Oct 2017  -  12Oct 2017 | Manual: **Orthographic**  CAD: Patterning  Reference Geometry, Linear Pattern, Circular Pattern, Mirror Pattern, Pattern Seed | Assignment 4 |
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| ***Exercise 2/Quiz 1*** |
|  | 15Oct 2017  -  19Oct 2017 | Mid Semester Break |  |
| 6 | 22Oct 2017  -  26Oct 2017 | Manual: **Orthographic**  CAD: Revolved Features  Sketch Geometry of Revolved Feature, Dimensioning The Sketch, Chamfer, Edit Material, Mass Properties | Assignment 5 |
| ***Exercise 3*** |
| 7 | 29 Okt 2017  -  2 Nov 2017 | Manual: **Isometric**  Sketches  CAD: Shelling and Ribs  Shelling-Order of Operation, Face Selection  Rib-Rib Sketch, Converting Edges | |  | | --- | | **Test #1\***  **Q1: Geometri**  **Q2: Orthographic** |   ***Exercise 4/Quiz 2*** |
| 8 | 5Nov 2017  -  9Nov 2017 | Manual: **Assembly**  CAD: Editing  Repairs-Part Editing, Fillet Xpert  Design Changes-Rebuilding Tools,Sketch Contours | Assignment 6  **Assigning CAD Project to Students** |
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| 10 | 12 Nov 2017  -  16 Nov 2017 | Manual: **Assembly**  CAD: Using Drawing  Section View, Model View, Broken View, Detail View  Drawing Sheet and Sheet Format, Annotations  Printing |  |
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| Project Pursuit |
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| 11 | 19 Nov 2017  -  23 Nov 2017 | Manual: **Assembly**  CAD: Bottom-Up Assembly Modeling  Creating A New Assembly, Adding Component, Sub-Assemblies, Smart Mate |  |
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| Project Pursuit |
| ***Quiz 3*** |
| 12 | 26 Nov 2017  -  30 Nov 2017 | Manual: **Sectioning**  CAD: Using Assemblies  Bill of Materials  Assembly Drawing-Adding Ballons, Editing Exploded View and Explode Line Sketch | Assignment 7 |
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| Project Pursuit |
| ***Exercise 5*** |
| 13 | 3 Dec 2017  -  7 Dec 2017 | Manual: **Machine Drawing**  CAD: Project Pursuit |  |
| 14 | 10 Dec 2017  -  14 Dec 2017 | CAD: Project Pursuit |  |
| 15 | 17 Dec 2017  -  21 Dec 2017 | CAD: Project Pursuit & Discussion | **Test #2\*** |

**Assessment:**

1. Assignment

Manual – 20%

CAD – 10%

1. Test #1 - CAD: 20% (Geometry/Orthographic + 3D Model)
2. Test #2 – Manual(Common): 20% (Isometric + Sectioning + Working Drawing + Machine Drawing)
3. Project (Group): 30%

**References:**

1. David L. Goetsch, William S. Chalk, John A. Nelson and Raymond L. Rickman (2005), Technical Drawing , Fifth edition, Thomson Delmar Learning
2. Mohd Fadzil Daud dan Khairul Anwar Hanafiah (2005), Panduan Asas LukisanK ejuruteraan, Edisi Kedua, Penerbit UTM
3. Mohd Ramzan Manial, Yahya Samian dan Badri Abdul Ghani (1996), Lukisan Kejuruteraan Asas, Edisi Kedua, Penerbit UTM

**Note:\***

Test #1:

Each section conducts own CAD test possibly before or just after semester breaks.

Test #2:

Date: ***TBA***

Directive: Just bring along your pencil(s), eraser and ruler.