

CAD Department Course Outline

DRFT 2543 – Advanced Parametric Modeling (S)

Catalog Description:

This course is a continuation of DRFT 2533 and emphasizes the more advanced features and concepts of parametric design with Autodesk Inventor. Topics include creating sweeps and lofts, creating and editing assembly constraints, driving constraints, creating adaptive parts, creating and using iParts, presentation files, and sheet metal parts.

Prerequisites:

DRFT 2533

Credit hours/Contact Hours/Load hours:

3/3/3

Target Audience/Transferability:

This course is an elective for students pursuing an AAS degree in CAD with the Mechanical Design option and is non-transferable

Student Learning Outcomes:

Students will:

- Create sweep, loft, and coil features
- Create and modify a parts list on a drawing
- Create section and break out views from assemblies
- Apply and edit assembly constraints
- Demonstrate the ability to drive assembly constraints
- Create and modify sheet metal parts and flat patterns
- Create and use iMates
- Create and modify exploded views in a presentation file

Topics:

- Importing AutoCAD 2D data into a sketch
- Creating a 3D sketch
- Applying and editing mating, insert, and tangent constraints to assemblies
- Editing parts in place within an assembly
- Working with adaptive parts
- Applying motion constraints to assemblies
- Using iParts and iMates
- Creating break out views from assemblies
- Creating and modifying parts lists for assemblies
- Creating presentation files
- Sheet metal parts

Forms of Assessment:

- Individual design project
- Group design project
- Peer reviews
- Portfolio of best work

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