

CAD Department Course Outline

DRFT 2533 – Parametric Modeling (F)

Catalog Description:

This course provides students with the skills they need to create, edit, and document part and assembly models of moderate complexity using Inventor software. The focus of the course will be to determine the best approach for the parametric design of individual parts and assemblies. Topics include the commands needed to conceptually sketch a part through the creation of a solid model, assembly design, and 2D drawing production.

Prerequisites:

DRFT 1234, DRFT 2154

Credit hours/Contact Hours/Load hours:

3/3/3

Target Audience/Transferability:

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

Student Learning Outcomes:

Students will:

- Develop a 3D solid model of a part using Inventor
- Create a top-down and a bottom-up assembly of 3D solid parts
- Develop a 2D drawing with the appropriate views of a 3D solid part
- Annotate a 2D drawing with the correct dimensions, tolerances, and text
- Create a presentation animation of a 3D assembly model
- Manage the completion of a project individually and as part of a team

Topics:

- The Inventor user interface
- Creating 2D sketches
- Constraining and dimensioning sketches
- Creating 3D parts from sketches
- Editing and adding 3D features to parts
- Resolving model failures
- Placing and constraining parts in assemblies
- Assembly modeling tools
- Creating drawings and views
- Annotating drawings

Forms of Assessment:

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

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