

Northwest Arkansas Community College
Business and Computer Information Systems Division

Discipline Code

DRFT

Course Number

2534

Course Title

Parametric Modeling I

Catalog Description

This course provides students with the skills they need to create, edit, and document part and assembly models of moderate complexity using a parametric modeling software, such as Autodesk Inventor. 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 sketch a part, the creation of a solid model, assembly design, and 2D drawing production.

Prerequisites

none

Credit Hours

4 credit hours

Contact hours

60 contact hours

Load hours

4 Load Hours

Semesters Offered

Fall, Spring

ACTS Equivalent

None

Grade Mode

A-F

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

General Education Outcomes Supported

None

Standard Practices

Topics list

- 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

Learning activities

Assessments

- Technical drawing assignments
- Projects

Grading guidelines

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = 0-59%