

Northwest Arkansas Community College
Business and Computer Information Systems Division

Discipline Code

DRFT

Course Number

2553

Course Title

Parametric Modeling with Solidworks

Catalog Description

(S) This course provides students with the skills they need to create, edit, and document part and assembly models of moderate complexity using Solidworks 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 1233; DRFT 2534, or instructor consent.

Prerequisites

DRFT 1233, DRFT 2534, or instructor consent.

Credit Hours

3 credit hours

Contact hours

45 Contact Hours

Load hours

3 Load Hours

Semesters Offered

Spring

ACTS Equivalent

None

Grade Mode

A-F

Learning Outcomes

Students will:

- Create fully constrained sketches for 3D models
- Develop 3D solid models from sketches using all the tools available in Solidworks
- Create solid models using advanced tools to sweep, loft, coil, shell, etc.
- Apply features to 3D parts as needed
- Create top-down and a bottom-up assemblies of 3D solid parts using the appropriate constraints
- Develop a 2D drawing with the correct views and annotation of a 3D solid part
- Develop a 2D drawing with the BOM and correct annotation of an assembly part
- Manage the completion of a project individually and as part of a team

General Education Outcomes Supported

None

Standard Practices

Topics list

- The Solidworks 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

Grading guidelines

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