Minnesota
Articulated College Credit (ACC) Agreement
www.CTEcreditMn.com

Agreement Name: **Parametric Design**

Agreement Last Reviewed: **Fall 2023**
Next Review Date: **Fall 2025**

College Courses

Class	Title	School	Credits	
DRFT 2503	Parametric Design I* - Solidworks (or)	Ridgewater College	3.0	of 3.0
DRFT 2513	Parametric Design II* - CREO (or)	Ridgewater College	3.0	of 3.0
DRFT 2515	Parametric Design III* - Autodesk Inventor Professional	Ridgewater College	3.0	of 3.0
MECA 1223	Mechanical Systems I (Parametric Design)	South Central College	2.0	of 3.0
CAD 1039	SolidWorks	Rochester Community & Technical College	1.0	of 4.0

Curriculum Content Objectives

To receive credit, students will meet 100% of the following content objectives:

1. Demonstrate view manipulation
2. Reorient a view
3. Access part files
4. Use multiple part windows
5. Erase parts and exit software
6. Describe constraints/relations in models
7. Demonstrate design planning
8. Create model templates
9. Demonstrate data management
10. Use a model template
11. Set up a sketch
12. Create an extrusion
13. Create a cut
14. Create a revolved feature
15. Demonstrate using multiple sketched features
16. Use external sketches
17. Create arc, circles and fillets in sketch mode
18. Create dimensions and constraints
19. Use the offset edge tools
20. Demonstrate ability to manipulate sketches
21. Demonstrate ability to use the various 3D round tools
22. Use Edit command
23. Use Edit definition command
24. Demonstrate using edit sketch
25. Use Undo/Redo functions
26. Demonstrate adding datum features
27. Place holes using the various hole options
28. Create a shell feature
29. Create a chamfer feature
30. Create a draft feature
31. Create a split draft
32. Create a rib feature
33. Create a swept feature
34. Create a blend feature (loft in Solidworks and Inventor)
35. Use the various blend options
36. Demonstrate ability to modify references
37. Create a mirrored feature
38. Demonstrate use of linear and radial patterns
39. Use the various resolve features options
40. Suppress/un-suppress features
41. Demonstrate adding parametric relations
42. Use info, set up and analysis tools
43. Create a drawing file

44. Create projected, auxiliary, section, detail and isometric views
45. Demonstrate use of Show/Erase dialog box
46. Display, create and edit dimensions and notes
47. Display drawing tolerances
48. Display drawing borders
49. Generate assemblies
50. Use assembly constraints
51. Create assembly drawings
52. Use Bill of Materials (BOM) data
53. Explode/un-explode assemblies

<u>Software Version</u>
Parametric Software Package that meets these learning outcomes.

Please complete/fill in the blank as to which software package is utilized in your classroom: _____

<u>Assessments</u>
Students must achieve no less than 80% or B for a final grade in the high school course to receive ACC.

<u>ACC Concept:</u>
Through Articulated College Credit (ACC), specific college curriculum content goals and assessments are embedded in participating high school career and technical education (CTE) programs as specified in this agreement. Relevant knowledge, skills, and standards are taught by qualified CTE high school instructor(s) in one or more high school course. ACC is awarded if the student meets the college equivalency standards and later enrolls in the college(s) listed below requiring the course in a specific program.