COLLIN COLLEGE

COURSE SYLLABUS

Course Information

Course Number: DFTG 1372

Course Title: SOLIDWORKS Essentials

Course Description: A study of mechanical drafting and design using SOLIDWORKS mechanical design automation software to build parametric models of parts and assemblies. The course teaches how to make drawings of those parts and assemblies through the use of dimensioning and tolerancing, sectioning techniques and orthographic projection.

Course Credit Hours: 3
Lecture Hours: 2
Lab Hours: 2

Prerequisite: None

Student Learning Outcomes: Upon successful completion of this course, students will be able to do the following:

1. Use the SOLIDWORKS User Interface and engage their design through the use of the Command Manager. (SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)
2. Sketch basic 2D designs using the rules that govern sketching. (SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)
3. Model basic parts by choosing the best profile and sketch plane. (SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)
4. Determine the proper Symmetry and Draft. (SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)
5. Use Linear Patterning, Circular Patterning, and Mirror Patterning in designs. (SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)
6. Use Revolved, Shelling and Rib Features in designs. (SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)
7. Use SOLIDWORKS SimulationXpress. (SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)
8. Repair and Edit designs. (SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)
9. Create Detailed Working Drawings with Section, Model, Broken, Detailed and Projected Views(SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)
10. Use Bottom-Up Assembly Modeling. (SCANS: F1,F3-5,F8-12,F14,F16) (SCANS: C1,C10-16,C18-20)

Secretary's Commission on the Acquisition of Necessary Skills (SCANS) - SCANS skills are a group of foundational skills and workplace competencies that the Secretary's Commission on the Acquisition of Necessary Skills established as vitally important for workplace success in the 21st century. In Collin's workforce programs, the SCANS skills are developed and reinforced throughout the curriculum to provide students with an opportunity to hone these skills/competencies in the context of their education. Over the course of an entire degree program, the successful student is expected to demonstrate all of the SCANS skills and competencies as part of their education. The SCANS Foundation Skills and Workplace Competencies are described at: http://www.collin.edu/academics/programs/Workforce_SCANS_Skills_Syllabi_Code_Key.pdf

Withdrawal Policy: See the current *Collin Registration Guide* for last day to withdraw.

Collin College Academic Policies: See the current *Collin Student Handbook.*

Americans with Disabilities Act Statement: Collin College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to contact the ACCESS office, SCC-D140 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current *Collin Student Handbook* for additional information.