

# SolidWorks : Parts, Assemblies & Drawings

## Syllabus

**Course:** Drafting 194 ~ SolidWorks: Parts and Assemblies

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**Textbook:** None

**Description:** Previous CAD/Drafting experience recommended. This course is an introduction to the 3D modeler SolidWorks. The course will focus on parts, assemblies and drawings. Topics will include sketching in SolidWorks, creating relationships, parametric constraints, 3D tools, configurations, associative 2D part drawings, design tables, and assemblies.

**Attendance Policy:** Regular attendance and participation are necessary for successful completion of the course. The learner is responsible for all material missed due to absence or tardiness.

**Derivation of Grade:** Drafting 194 is a project-based course and students will be required to complete each project successfully. If a submitted drawing is fully defined, dimensionally compliant, and followed proper technique it will receive 4 points. If it is deficient, it will be returned for revision and must be fixed. Return the marked up drawing after it has been revised with the re-submit date written on the drawing. **Do not hand in a new print.** A first revision will receive 3 points, second revision 2 . . . . An extra point may be deducted for drawings that are incomplete when submitted. Drawings of greater complexity may be doubled in value. Your final grade will be the percentage calculated from the total drawings assigned based on the following scale.

A = > 93.3%	B- = 80.0 – 83.3%	D+ = 66.7 – 69.9%
A- = 90.0 – 93.3%	C+ = 76.7 – 79.9%	D = 63.4 – 66.6%
B+ = 86.7 – 89.9%	C = 73.4 – 76.6%	F = < 63.4
B = 83.4 – 86.6%	C- = 70.0 – 73.3%	

**Academic Honesty:** All courses offered by the Computer-Aided Drafting and Design Department will be conducted with the highest standards of academic honesty. Each student is expected to support these standards by neither giving nor accepting assistance on quizzes, tests or exams, and by submitting only his or her own work for credit. Violations of these academic honesty standards will result in appropriate disciplinary action as spelled out in the student handbook. The incident will be documented and may be reported to the academic chair and/or program director for possible disciplinary actions up to and including course, program, or college expulsion.

**Cell phones and pagers** must be on mute during class. If you must take or return an emergency call, please do so out in the hallway.

**Disclaimer:** Information contained in this syllabus was to the best knowledge of the instructor considered correct and complete when distributed for use at the beginning of the semester. However, this syllabus should not be considered a contract with Kellogg Community College and any student, nor between the instructor and any student. The instructor reserves the right, acting within the policies and procedures of Kellogg Community College, to make changes in the course content or instructional techniques without notice or obligation.

**Americans with Disabilities:** Kellogg Community College does not discriminate in the admission or treatment of students on the basis of disability. KCC is committed to compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act.

## **Topic Outline**

- The SolidWorks interface
- Sketch planes
- 2D sketching and constraints
- Creating geometric relationships
- Part modeling
- 3D operations
- Hole wizard and Simple holes
- Viewing, shading, zooms and pans
- Editing sketches and feature definitions
- Using the feature manager and rollback
- Part configurations and design tables
- Creating assemblies
- Exploded assemblies
- Part editing in assembly
- Creating 2D orthographic drawings
- Section views, auxiliaries, enlarged details, and broken views
- Drawings of assemblies
- Introduction to lofts and sweeps
- Introduction to PhotoWorks rendering