

Basic 3-D Parametric Modeling-SolidWorks – Fall 2018
Course #: CAD 141 CRN 33383/33384

Instructor: John T. Genna, Jr
Office: Room C158
E-mail: jgenna@trcc.commnet.edu
Telephone: (860)215-9408
Class Hours: Tuesday & Thursday 12:30 – 2:36PM Room E116
Office Hours: M 2:00 – 3:00PM
T 2:30 – 3:30PM
W 2:00 – 3:00PM
R By Appointment

Required Text & Materials:

- SolidWorks 2018 Basic Tools
Paul Tran CSWE, CSWI, Published October 10, 2017
ISBN: 978-1-63057-162-7
 - Storage Media: Flash Drive
 - Headphones/earbuds – to listen to tutorials (when needed)
-

Course Description:

This course, and accompanying lab, is designed to expand and enhance the student's ability to combine and apply mechanical design principles with computer design techniques and capabilities. This course teaches the basic concepts of orthographic projection, isometrics, oblique drawings, and basic drafting technology. A component of this course will focus on descriptive geometry, which will nurture the visualization skills of students by identifying points, planes, and perpendiculars in various perspectives. Introducing the mechanical design software SolidWorks, this course begins to examine the basic functionality of drawing automation.

Course Objectives:

- Demonstrate the ability to use basic and advanced features of the current CAD software
- Design a part or assembly of parts using the CAD software.
- Use parametric modeling techniques to reflect engineering requirements.
- Apply top-down design principles to model a design.
- Use motion and interference checking to ensure that parts will not interfere throughout their complete range of motion.
- Use CAD software collaboratively when designing on a team
- Make appropriate selection of CAD functionality to use as tools in the design process.
- Communicate effectively the geometry and intent of design features.

Course Evaluation: Course evaluation will be based on attendance/participation, lab assignments, exams and a final project. All coursework should be saved to your flash drive and submitted by the due date. Students are responsible for backing up their files in case of lost/damaged flash drive.

Grade Computation

The following is a breakdown of the final grade:

Attendance/Class Participation	10%
Assignments/Quizzes	40%
Midterm Exam	20%
Final Project	30%
TOTAL	100%

Grading Distribution:

A	94-100	C	73-76
A-	90-93	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	0-59

Attendance/Participation: Each student is expected to attend every class. This course is designed in such a way that a student should get more from the in-class activities than from the textbook alone. If you miss a class, it is your responsibility for obtaining notes, handouts and assignments. If you cannot attend a lecture due to extraordinary events, notify the instructor in advance of the class that will be missed. Unless special arrangements have been made with the instructor in advance, the due date for the coursework will remain as indicated.

Assignments: Lab assignments are assigned on a weekly basis and will be submitted at the beginning of class on/before the due date. **Late assignments:** Assignments not handed in on time will have 10 points deducted per class late. No assignments accepted after (3) classes late.

Exams: Exams will cover material relative to the comprehension of SolidWorks applications as given in the text, handouts, assignments, videos and lectures. Exams will be open book/notes. Exams missed must be completed prior to the next scheduled class.

Final Project: There will be a final project that will be discussed further in class.

Disabilities Statement: Students with disabilities are guaranteed reasonable accommodation under the provisions of the Americans with Disabilities Act of 1992. Disclosure of a disability must be voluntary and initiated by the student. For further assistance, please contact Matt Liscum in the Office of Disability Services at 860.215.9265 or mliscum@threerivers.edu. Please note that an instructor cannot provide disability accommodations until a student provides the necessary paperwork from the college's Office of Disability Services.

Academic Integrity: Academic integrity is essential to a useful education. Failure to act with academic integrity severely limits a person's ability to succeed in the classroom and beyond. Furthermore, academic dishonesty erodes the legitimacy of every degree awarded by the College. In this class and in the course of your academic career, present only your own best work; clearly document the sources of the material you use from others; and act at all times with honor.

Plagiarism: Plagiarism is the unacknowledged use of another person's work or ideas in your writing. It is often known as copying word-for-word. However, even paraphrasing without acknowledgement or using the ideas of peers garnered from class discussion or a study group is considered plagiarism. Whether it is conscious or unconscious, plagiarism is a serious academic offense. Your writing for this course, and any other course at TRCC, is expected to be original, and the product of your own thinking. A student who has plagiarized will receive a ZERO on his/her assignment and may be reported to the Academic Dean and/or Student Services Dean for disciplinary action.

Technology Statement: The use of cell phones or other technological devices is not permitted during class time, unless deemed appropriate by the instructor.

Electronic Learning Portfolios: All students are required to maintain an online learning portfolio in [Digication](#) that uses the college template. Through this electronic tool students will have the opportunity to monitor their own growth in college-wide learning. The student will keep his/her learning portfolio and may continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the

college experience for all. Student work reviewed for assessment purposes will not include names and all student work will remain private and anonymous for college improvement purposes. Students will have the ability to integrate learning from the classroom, college, and life in general, which will provide additional learning opportunities. If desired, students will have the option to create multiple portfolios.

Email: Correspondence by email is considered a method of formal communication. Emailing an instructor is not the same as emailing or texting a friend. Please use a proper salutation, complete sentences, punctuation, proper spelling and identify yourself by name in the body of the email. **Students must use their [college issued email account](#). College issued email is the official mode of communication used by the college to contact students.**

Class Cancellation: To determine if the college is closed, please visit the TRCC webpage at <http://www.trcc.commnet.edu/> and/or sign-up for notification through MyCommNet ALERT.

College Withdrawal Policy: Course withdrawals are accepted up until the week before classes end. Withdrawal forms are available online or at the Registrar's office. The withdrawal does not have to be signed by the instructor but it is strongly advised that you speak with your instructor before withdrawing. If necessary, you can withdraw over the phone by calling the Registrar's Office at 860.215.9064. Emails and faxes are also accepted. If you are receiving financial aid, it is strongly recommended that you contact the [Financial Aid Office](#) before withdrawing. Withdrawal may affect your financial aid for current and/or future semester(s). It is your responsibility to confirm that the withdrawal has been received.

The last day to withdraw from the Fall 2018 semester is December 9, 2018

Class Schedule (subject to change at instructor's discretion):

Fall 2018 – CAD 141– Course Outline				
Week #	Date	Homework	Assignment Topics	Text Reading
1	8/28 & 8/30	Finish Sketch Packets	Go over Syllabus, Menus, Options, Templates Visualization/Object Perspective	Chapters 1 & 2
2	9/4 & 9/6	Extrude Boss/Cut p.3-29	Extrude Options, Introduction to Blueprint Reading	Handouts, Chapter 3
3	9/11 & 9/13	Ext. Boss/Cut p.4-21	Sketching on a Plane, Extrude and Revolve	Handouts, Chapter 4
4	9/18 & 9/20	Styrofoam Box p.6-10	Revolved Parts, Rib, Shell and Mirror Features	Chapters 5 & 6
5	9/25 & 9/27	Circular Base Mount p.7-24	Patterns	Chapter 7
6	10/2 & 10/4	Int./Ext. Threads p9-14	Part Configurations, Modeling Threads	Chapters 8 & 9
7	10/9 & 10/11	Cam Followers p.11-16	Bottom Up Assembly, Advanced Mates	Chapters 10 & 11
8	10/16 & 10/18	Handout	Layout Assembly, Exploded View	Chapters 12
9	10/23 & 10/25		Midterm Exam Review, Exam	
10	10/30 & 11/1	Mini Vise p.15-20	Drawing Preparation, Assembly Drawings	Chapters 14 & 15
11	11/6 & 11/8	Machine Block p.17-2	Drawing Views, Detailing, Final Project Defined	Chapters 16 & 17
12	11/13 & 11/15		Sheet Metal Drawings, Configurations,	Chapters 18 & 19
13	11/20 & 11/22		Open Lab - Work on Final Project	
14	11/27 & 11/29		Open Lab - Work on Final Project	
15	12/4 & 12/6		Finish Up Final Project, CSWA Prep	
16	12/11		CSWA Exam – 3 HOURS EXAM (12:30 – 3:45)	

FALL 2018 Standard 15 Week Session

Aug 27	Registration deadline and last day to drop classes for full tuition refund
Aug 28	Classes begin, add and drop periods begin
Sep 3	Labor Day - college closed <i>and</i> last day for registered students to add a class - online (Aug 31 <u>in person</u>)
Sep 4-7	Welcome Week
Sep 10	Last day to drop classes and partial tuition refund
Sep 17	Constitution Day observed (classes in session)
Sep 21	Professional Day (classes in session)
Sep 25	Last day to select audit option
Oct 16	Reading Day * See Additional Notes
Nov 1	Continuing Degree-Seeking Student Registration for Winter '18 Intersession and Spring '19 Semester Advising day (classes in session)
Nov 6	Last day to select pass/fail option, last day to submit incomplete work from Spring '18 and Summer '18
Nov 15	New Student and Non Degree-Seeking Student Registration for Winter '18 Intersession and Spring '19 Semester, and last day to apply for spring graduation (May '19)
Nov 21	College open - no classes in session
Nov 22-25	Thanksgiving recess
Dec 9	Last day to withdraw from classes - online (Dec 7 <u>in person</u>)
Dec 16	Last day of 15 Week Session
Dec 21	Final grades due to Registrar's office
Dec 24	Grades available on web
Dec 25	Christmas Day - college closed