EGT 251
PRINCIPLES OF CAD

Course Description
This course includes the additional use of CAD software for production of technical drawings and related documentation.
3 Cr (3 lect/pres, 0 lab, 0 other)

Course Focus
Upon completion of the course a student will be able to work with new commands and command structures using SolidWorks. The course will teach part modeling, assembling, and creating drawings.

Text and References

Course Goals
The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives. (*designates a CRUCIAL goal)
1. learn Solidworks interface
2. understand Solidworks startup
3. model Solidworks part
4. know Solidworks resources
5. learn sketch entities
6. explore sketch tools
7. learn sketch modification
8. learn features tools
9. perform extrusion feature
10. build revolve feature
11. understand loft feature
12. learn sweep feature
13. learn feature modification
14. sketch driven parts
15. understand curve driven patterns
16. create table driven patterns
17. understand reference planes
18. explore CSWA preparation
19. learn advanced modeling tools
20. create revolved 3D feature
21. use copy feature
22. create sweep feature
23. use draft feature tools
24. learn 3D loft feature
25. understand circular pattern
26. explore reference planes
27. create helix shape
28. create equation driven curve
29. create equation driven 3D object
30. explore curve surface area
31. understand 3d Object volume
32. understand top down assembly
33. understand bottom up assembly
34. explore mate components
35. build assemble parts
36. explore assembly analysis
37. learn exploded view
38. animate exploded view
39. handle large assembly
40. differentiate part-assembly drawings
41. apply bottom up approach
42. create drawing template
43. insert drawing views
44. learn assembly exploded tools
45. animate exploded assembly view

**Student Contributions**
Each student will spend approximately 2.5-5 hours per week preparing for class and completing assignments to turn in weekly.
Each week students will turn in assignments as specified on Blackboard. In addition, chapter tests are to be completed as assigned. Students will also complete a final exam/project to demonstrate their knowledge of the material.

**Student Attendance Policy:** See student handbook within the TCL Catalog.

**Course Evaluation:**
The grading scale is as follows:
Assignments and class work = 50%, Midterm Exam = 25%, and Final Exam = 25%.
90 - 100 = A  80 - 89 = B  70 - 79 = C  60 - 69 = D  Below 60 = F

**Course Schedule**
The class meets for 2.5 lecture/presentation hours per week. Course content will be taught in the order that the content goals are presented in the syllabus.

Approved by:  Kenneth Flick  ______________________________________________________
Ken Flick, Division Dean for Business/Industrial Division

Developed/Revised: 1/2013
ADA Statement
The Technical College of the Lowcountry provides access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the counselor for students with disabilities at (843) 525-8228 during the first ten business days of the academic term.

Academic Misconduct
There is no tolerance at TCL for academic dishonesty and misconduct. The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship. It is the student’s responsibility to address any questions regarding what might constitute academic misconduct to the course instructor for further clarification.

The College adheres to the Student Code for the South Carolina Technical College System. Copies of the Student Code and Grievance Procedure are provided in the TCL Student Handbook, the Division Office, and the Learning Resources Center.

Attendance
The College’s statement of policy indicates that students must attend ninety percent of total class hours or they will be in violation of the attendance policy.
- Students not physically attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING. Reinstatement requires the signature of the division dean.
- Students taking an online/internet class must sign in and communicate with the instructor within the first ten calendar days from the start of the semester to indicate attendance in the class. Students not attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING. Reinstatement requires the signature of the division dean.
- In the event it becomes necessary for a student to withdraw from the course OR if a student stops attending class, it is the student’s responsibility to initiate and complete the necessary paperwork. Withdrawing from class may have consequences associated with financial aid and time to completion.
- When a student exceeds the allowed absences, the student is in violation of the attendance policy. The instructor MUST withdrawal the student with a grade of “W”, “WP”, or “WF” depending on the date the student exceeded the allowed absences and the student’s progress up to the last date of attendance

Or
Under extenuating circumstances and at the discretion of the faculty member teaching the class, allow the student to continue in the class and make-up the work. This exception must be documented at the time the allowed absences are exceeded.
- Absences are counted from the first day of class. There are no "excused" absences. All absences are counted, regardless of the reason for the absence.
- A student must take the final exam or be excused from the final exam in order to earn a non-withdrawal grade.
- A copy of TCL’s STATEMENT OF POLICY NUMBER: 3-1-307 CLASS ATTENDANCE (WITHDRAWAL) is on file in the Division Office and in the Learning Resources Center.

Hazardous Weather
In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WZGO 98.3, WXH 106.1, WWVV 106.9, WLOW 107.9, WGR 104.9, WFXH 1130 AM, WLOW 107.1, WSOK 1230 AM, WAEV 97.3, WTOC TV, WTGS TV, WJWJ TV, and WSAV TV. Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System.

Emergency Text Message Alert
Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. Participants receive immediate notification of emergency events and weather cancelations via text messaging on their cell phones. Participants can also opt in to receive non-emergency news and announcements. Go to www.tcl.edu. On the homepage, click on “emergency Text Alert at TCL” and fill out the form or go to www.tcl.edu/textalert.asp