

Text(s) & Materials:

Electronics Project Management and Design, 2nd ed. , D. Joseph Stadtmiller, Pearson-Prentice Hall, 2004. ISBN: 0-13-111136-1. (This text will also be used for ESET-365 and ESET-465.) In addition the instructor will distribute handouts and web links to internet sites that help support the objectives of the course.

Students will also be required to purchase an electronic kit for soldering as part of the lab exercise. Most of these kits are available for a price range of \$20 - \$40. Further details will be given in a lab exercise early in the semester.

Students should regularly check the Forums at cset.stcc.edu/forums for current materials for ELE-130.

Office Hours: Bldg. 17 Rm. 631. Office hours posted on the door.

Grading Policy

· **Professionalism:** One of the key goals of this course is to emphasize professionalism. This includes concepts such as attendance, preparedness, participation, promptness, courtesy and respect. Attendance is mandatory. Students missing more than 3 scheduled classes and/or labs may be dropped from the course. Students are expected to be prepared for each lecture and lab session, be prompt for class, be considerate and courteous to those around you.

· **Due Dates:** The student is required to pass in all assigned work by the due date. Late work is depreciated by 10% every week or part of a week it is late. Solutions to the homework will be distributed. Once the solution is distributed no further homework will be accepted. It is the student's responsibility to be aware of all work assigned and the due dates.

· **Quality:** Submission of poor quality work will not be accepted. Submissions which do not meet minimum documentation standards set forth in class, are incoherent, or are illegible will be returned [not graded] to the student. These cases are treated as if no work was submitted. All homework assignments must be typed. Unless otherwise noted: Handwritten submissions are not acceptable.

· **Academic Honesty:** All students must do their own work. Academic dishonesty of any manner is not tolerated. In the event it is discovered by the professor ALL PARTIES INVOLVED receive a grade of "F" [0.0]. No distinction is made between those "cheating" and those being "cheated from". If a student believes his/her work is being borrowed without consent it is her/his responsibility to report the incident. This is the only means to escape the consequences. All incidents are examined on a case-by-case basis by the professor whose decision is final.

○ **NOTE:** In regards to citing other's work for research, using established content is permitted under most circumstances, as long as proper reference and credit is given to the original author(s). Lab assignments will be given each week. It is the student's responsibility to make sure that each assignment is completed in a timely manner. In general, lab exercises are due one week after they are assigned. Some experiments will require more than one week to complete. Most labs will require some preliminary research or preparation. It is expected that students perform this work before the scheduled lab period to allow the full lab period for the hands-on portion of the lab.

Grade Evaluation:

ELE-130 (Lecture):

Homework:	25%
Exams (2):	60% (30% each)
Professionalism:	15%

ELE-130L (Lab):

Lab Experiments:	60%
Research:	20%
Project(s):	20%

Grade Determination:

There are two exams during the semester: a mid-semester and a comprehensive final exam.

5. Class Organization

The course is presented in a lecture format. Relevant questions and discussion are encouraged. Presentations may include a combination of blackboard & chalk, computer based presentations (PowerPoint) & computer simulation. Labs will include hands-on activities making use of available test & assembly equipment as well as computers and software applications. Internet research will be required for numerous aspects of the course.

Course Outline*:	
Week	Topic
1	Introduction and Course Overview
2	Company Structure: CEO, Marketing and Sales, Engineering
3	Company Structure: Manufacturing and Operations & Quality Assurance
4	Company Structure: Finance, HR & the role of the technical professional
5	Managing projects, Concurrent Engineering (CE), Total Quality Management (TQM), being a team player
6	Approval Agencies.
7	MidTerm Exam
	The Six Steps of Problem Solving
8	1.) Research and Gather Information
9	2.) Define the Problem, develop design specifications
10	3.) Scheduling and schedule formats, Gantt Charts, PERT/CPM, etc. Project Scheduling: bottleneck issues, scheduling procedure.
11	4.) Execution: Preliminary design, component selection, construction, prototyping.
12	5.) Verify the solution: test & calibration, burn-in, reliability, statistics.
13	6.) Conclusion, Project Review
14	Quality, LEAN, Six Sigma, Greenbelt, Blackbelt.
15	Final Exam
*Note:	The instructor reserves the right to modify the course outline as necessary to best serve the educational needs of the students.