

CASPER COLLEGE COURSE SYLLABUS
ES 1060 Introduction to Engineering Problem Solving

Semester/Year: Fall 2018

Lecture Hours: 3

Lab Hours: 0

Credit Hours: 3

Class Time: 4:00 – 5:50 PM

Days: MW

Room: PS224

Instructor's Name: Paul Marquard

Instructor's Contact Information:

Office Phone: (307) 268-2250

Email: marquard@caspercollege.edu

E-mail is the easiest way to get in touch with the instructor; e-mail is checked continuously while in the office and is checked at home multiple times. You may also call the instructor's office at any time; if the instructor is not available, leave a voice mail and your call will be returned as soon as possible.

Office Hours: MWF: 10:00 – 10:50 am, MT: 2:00 – 2:50 pm

Course Description: An introduction to engineering documentation and reports, computing tools for data presentation and graphics, equation solving, and manipulation of tabular data.

Statement of Prerequisites: MATH 2200 (or concurrent enrollment)

Goal: The goal of this course is to educate the student in the use of calculators and computers in the field of engineering.

Outcomes: Upon completing this course, students will

- be able to use problem solving techniques used in engineering.
- be proficient with software systems used to create reports, display information graphically, and solve numerical systems. Specifically, the software used will be MS Word, MS Excel, and MatLab.
- be proficient with the use of a scientific calculator in solving engineering problems.
- have used the scientific method.
- have solved problems using critical thinking and creativity.
- have used quantitative analytical skills to evaluate and process numerical data.

Methodology: Most information will be presented in a lecture format demonstrating the characteristics of the calculator and software used. Some of these lectures will be recorded and posted to YouTube. The students will take lecture information and use it in a laboratory setting, where individual and small group work will be used as assessment tools to show proficiency with the problem solving techniques, calculator, and software.

Evaluation Criteria:

Exams	30%
Labs, Homework, & Quizzes	50%
Comprehensive Final	20%
Total	100%

Grading Scale for the Course:

90 ≤ A ≤ 100

80 ≤ B ≤ 89

70 ≤ C ≤ 79

60 ≤ D ≤ 69

0 ≤ F ≤ 59

Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.

Required Text, Readings, and Materials: *Thinking Like and Engineer, 4th edition*, by Stephan, Bowman, Park, Sill, & Ohland

Class Policies:

Homework will be submitted either on paper in class or electronically through the Moodle system. The method of submission will vary from one assignment to another. Homework will not be accepted after it is due. Make-up Labs will not be given unless arranged prior to the scheduled lab.

Quizzes will be given sporadically through the semester. They will cover reading material and when video lectures are assigned they can cover that material as well. You must read the chapters as assigned and watch videos when assigned.

Exams: If you are aware that you will have to miss an exam, let the instructor know as early as possible. A make-up exam may be given if the situation merits, and will take place outside of the regularly scheduled class period. If class is canceled the day of an exam, that exam will be given on the next class meeting.

You are encouraged to discuss course topics and assignments with one another. Work not picked up by the end of the semester becomes the property of the instructor. All graded material must be saved in case the instructor loses the grades on the computer.

Last day to change to an audit or withdraw from the course is November 8, 2018.

Student Rights and Responsibilities: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Chair/Program Director, the Dean, and lastly the Vice President for Academic Affairs.

Academic Code Violations: (Cheating and Plagiarism) Casper College demands academic honesty. Academic code violations focus on academic dishonesty, which includes but is not limited to, cheating, plagiarism, buying, selling, or stealing exams; substituting for another person, collusion when collaboration is not approved; knowingly furnishing false information; and copyright violations. Violations of the college's academic code can result in a range of negative consequences from failing a graded assignment to expulsion from the college. See the Student Code of Conduct for more information on this topic.

Official Means of Communication: Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly. This is also, where you will find course evaluation links during course evaluation periods.

ADA Accommodations Policy: If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the

Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu . The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

Harassment and discrimination: Casper College seeks to provide an environment that is free of bias, discrimination and harassment. If you have been the victim of sexual harassment/gender or sex discrimination/sexual misconduct/assault, we encourage you to report this. If you report this to an employee, she or he must notify our college's Title IX Coordinator, Linda Toohey, Associate Vice President for Student Services, 125 College Drive, GW 412, Casper, WY 82601; (307) 268-2667; linda.toohey@caspercollege.edu about the basic facts of the incident. Employee concerns should be directed to the Human Resources Director. For more information about your options, please go to: caspercollege.edu/nondiscrimination

TENTATIVE COURSE SCHEDULE (Subject to Change)

Week	Chapter Readings	Comments
August 20, 22	Sig Figs, HP 48, Matrices	
August 27, 28	Chapters 7 – 9	Dimensions & Units
September 5	Word	Tables, Fonts, Equation Writer
September 10, 12	Chapter 10 & 11	Workbooks & Graphs
September 17, 19	Exam 1	Exam 1
September 24, 26	Chapter 12	Curve Fitting
October 1, 3	Chapter 13	More powerful curve fitting
October 8, 10		Repetitive Calculations (Loops to be)
October 17	Chapter 14	Statistics
October 22, 24		Exam 2
October 29, 31	Chapter 15	MatLab
November 5, 7	Chapter 16	Functions and Programs
November 12, 14	Chapter 17	I/O
November 19	Chapter 18	Logic and Conditionals
November 26, 28	Chapter 19	Loops
December 3, 5		Exam 3
December 10		Final Exam