

DESCRIPTION OF COURSE: The course educates experimental and engineering design principles with emphasis to the solution of energy and environmental problems.

TEXTS:

1. D. C. Montgomery, Design and Analysis of Experiments, 8th Edition, John Wiley & Sons, New York, 2013. Text is considered the “foundation” for experimental and engineering design for first-year graduate level engineering students and senior-level engineering students.
2. G. W. Oehlert: First Course in Design and Analysis of Experiments, Freeman, New York, 2000. Book covers statistical analysis of experimental data with the use of statistical software.

REFERENCES:

1. W. Navidi: Principles of Statistics for Engineers and Scientists, 3rd edition, McGraw-Hill, New York, 2011.
2. J. L. Devore: Probability and Statistics for Engineering and the Sciences, 7th Edition, Thomson, Belmont, CA, 2008. Text is used for a junior-level statistics course as an introductory general background.
3. H. J. Seltman: Experimental Design and Analysis, Carnegie Mellon University, Pittsburgh, 2012. Book describes experimental design for behavioral/social sciences.
4. R. L. Ott and M. Longnecker: An Introduction to Statistical Methods and Data Analysis, 6th Edition, Brooks/Cole, Belmont, CA, 2010. Text is an introductory level overview with knowledge of algebra

GRADING: Exams and assignments will weigh as follows:

ITEM	WEIGHT
Assignments	10 Points/Assignment
Class Examinations	250 points/Examination
Course Reports	250 points/Report
Final Examination or Report	350 points

Final Grade *	Minimum Points
A	0.90 X Total Points
B	0.80 X Total Points
C	0.70 X Total Points
D	0.60 X Total Points

* At the end of the semester, a grade of Incomplete will not be given under any circumstances. Make-up examinations will not be given.

ATTENDANCE POLICY: Attendance will be taken randomly throughout the semester; with more than 3 absences, a student will be dropped from the class. Examinations will be prepared from class notes, readings from technical references given in class and class “throwaways.”

SAFETY STATEMENT: The Department of Mechanical Engineering at the University of Texas at El Paso is committed to education and research with providing simultaneously a safe and healthy environment for its students, staff, faculty and the general public.

Our goal is to maximize education and research that can only occur if you, the individual, minimize hazards and risks. The minimization can be done by:

- Providing adequate control of health and safety risks arising from all activities;
- Consulting with employees on matters affecting their health and safety;
- Providing and maintaining safe laboratories and equipment;
- Ensuring safe handling and use of substance;
- Ensuring all employees are competent and have adequate training to do their task; and
- Maintaining clean, safe and healthy working conditions

The principal investigator or individual in charge of each laboratory is ultimately responsible for safety in that respective laboratory. Within the department, we hold every employee (staff, faculty, student) responsible for implementing the department’s safety practices and safety policy. We hold every employee (staff, faculty, student) responsible for ensuring within the department to establish effective environmental safety and occupational health standards.