

Syllabus
COMPUTATIONAL/GRAPHICAL METHODS IN MATERIAL SCIENCE
MME 1205

Course Description:

This course involves the use of computers and computational methods to solve problems in material science and engineering. Students will employ commercial packages to understand concepts in probability and statistics, experimental design, error analysis and numerical methods in material science and engineering.

Prerequisite: CHEM 1305.

Professor:

Christopher Bradley
Office: M-201C Metallurgy Suite, Engineering-Science Complex
E-mail: cbradley2@utep.edu

Office Hours:

Tues & Thurs 1:30 pm to 3:00 pm. These may change so please feel free to talk with me in my office, in the class or email me with any questions or to schedule an appointment.

Meeting Times and Places:

Tuesday and Thursday, 3:00pm – 4:20pm, Room 211, Liberal Arts Building.
There may be a few meetings in other places--for laboratory demonstrations, experiments, design activities and/or testing. I will announce these when and if these meetings occur.

Deliverables and Grading:

30% Homework & Quizzes
40% Exams (4) – 10% each
15% Attendance
15% Final Project or Test – Thursday May 12, 2016 4:00pm-6:45pm

Course Outline:

Note: we will not necessarily go through these topics in the order shown here.

1. Introduction to Excel – Basics, graphing and functions.
2. Introduction to MATLAB – Basics, problem solving, functions and graphs.
3. Introduction to Minitab – Basics, problem solving and graphs.
4. Introduction to Solidworks – Design basics.

Textbook and Other Readings:

Engineering with Excel, Fourth Edition, Ronald W. Larsen, Pearson (2013). ISBN-13: 978-0-13-278865-6

MATLAB for Engineers, Third Edition, Holly Moore, Pearson (2012). ISBN-13: 978-0-13-210325-1

**You will need to use the Internet extensively for some assignments and books available in the library.

Group Work, Cheating, Plagiarism and Quality:

I encourage you to work together in groups to solve homework problems. Discussing problems in groups is an effective way to learn difficult concepts. Put all names of collaborators on the assignment when you have worked in a group, however everyone must turn in their own assignment. Copying another person's work is cheating and will be treated as such.

You must work alone when completing quizzes and exams.

Your work must be professional. If you would be embarrassed to hand your homework to your supervisor, please do not hand it to me. Work that is deemed unprofessional or unreadable will be returned ungraded.

Late work is generally not accepted. Work can be turned in at the beginning of class.

Please Note: NO programmable calculators will be allowed for exams!

Cheating/Plagiarism:

Cheating is unethical and not acceptable. Plagiarism is using information or original wording in a paper or reference without giving credit to the source of that information or wording: it is also not acceptable. You may not submit work for this class that you did for another class. If you are found to be cheating or plagiarizing, you will be subject to disciplinary action, per UTEP catalog policy. Refer to <http://www.utep.edu/dos/acadintg.htm> for further information.

Disabilities:

I will make any reasonable accommodation for students with limitations due to disabilities, including learning disabilities. Please see me personally before or after class in the first two weeks or make an appointment to discuss any special needs you might have. If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.