

VALENCIA COLLEGE

Department of Architecture, Engineering, and Technology

West Campus, Building 9, room 140, (407) 582-1902

EGN 1007C: Engineering Concepts and Methods

Professor: Prof. M. Kar
Office: West Campus, Building 11, Room 259
Phone: 407-582-1182 (office)
Email: mkar@valenciacollege.edu (prefer BlackBoard email)
Class Time: Wednesday, 1:00 P.M. to 3:45 P.M.
Office Hours: Monday / Tuesday/Wednesday/Thursday: 9:00 AM to 10:00 AM
Tuesday / Thursday: 1:00 PM to 2:00 PM
Monday/Wednesday: 11:30AM to 1:00 PM
Friday: 9 AM to 10:00 AM (on-line)

Textbooks: No text book is required

Class Goals: Learn to use computer and applications software in solving engineering problems

- Excel
- MATLAB
- MathCAD and TI-89

Course Outcomes:

The student will be able to:

- analyze any engineering problem by walking through the various problem solving methodology steps
- apply this problem solving methodology within the Microsoft Excel software
- apply this problem solving methodology within the MATLAB software

Grading Policy:

Your final grade in the course will be based on the following:

Lab Assignments	30%
Excel Project	10%
Quizzes	30%
Final	30%

(Quizzes are usually given during the first 45 minutes of class...**no make ups**)

After your numerical grade has been calculated, your letter grade will be determined as follows:

A	90-100% of the total percentage points possible
B	80-89% of the total percentage points possible
C	70-79% of the total percentage points possible

- D 60–69% of the total percentage points possible
F less than 60% of the total percentage points possible

DISCLAIMER: Any changes in the policy and/or schedule of this syllabus may be made at anytime during the semester at the discretion of the professor.

Class Rules:

- Tardy/Unexcused Absence Policy:
 1. **More than 3 unexcused absences** could result into withdrawn from the course.
 2. Any student arriving after the class roll is taken, will be considered **absent** unless agreed to in advance by the professor.
- **All assignments are due at the end of each class period.**
- **No late work will be accepted.** You can always submit your work earlier via email or BlackBoard.
- **No make-up quizzes** are permitted unless prior arrangement with the professor has been made.
- **All Quizzes and the Final Exam are in-class exams. Credit will not be given if you are not present in the class during the quiz or exam.**
- **Final Exam is required. Failing to take the final exam will result in overall grade “F”.**
- beepers and cellular phones must be turned **off** or put in silent mode during the class.
- **No food or drinks** are allowed in the classroom.
- It is the student’s responsibility to withdraw from the course before the deadline.
- If the student is absent or has missed any part of the class, then it is the student’s responsibility to obtain the missed information from the professor or other students **before** coming to the next class.
- Submitting identical assignment is considered as **cheating** and can results to zero grade.
- **Cheating is prohibited.** If any student is caught cheating, the professor has the right to withdraw the student from the class and recommend expulsion from the program.

Important Dates:

Monday, Jan. 19th
Feb 13th
March 9th – 15th
Friday, March 27th
April 27th to 30th
May 4th

College is closed
College is closed
Spring Break
Withdrawal deadline for “W” Grade
Final Exam
Grades are due

Class Schedule: The following is a tentative schedule based upon class needs.
The professor reserves the right to make any schedule changes necessary.

<i>Date</i>	<i>Goals</i>
01/14	Overview of the Course Excel: Fundamentals/ Build-in trigonometric Functions/Formulas <i>Lab Assignment : Excel 1</i>
01/21	Excel : Import Data/Build-in-Statistical Functions/2D Graph - line, column, pie <i>Lab Assignment : Excel 2</i>
01/28	Excel : Curve fitting/Trendline, 3D Graph - surface, mesh <i>Lab Assignment : Excel 3</i>
02/04	Excel : Matrix operations, Solving simultaneous equations, Quadratic equations <i>Lab Assignment : Excel 4</i>
02/11	Excel: Build-in-Logical function - IF, AND, NOT, OR <i>Lab Assignment : Excel 5</i>
02/18	Excel Project: on Time management and Financial planning <i>Lab Assignment : Excel 6</i>
02/25	Quiz 1 : Excel <i>Lab Assignment:</i> TI-89 Calculator: Solving simultaneous equations/Scalar and Vector product
03/04	MathCAD Fundamentals/ MathCAD Functions, Working with Matrices, Graphing <i>Lab Assignment : MathCAD 1</i>
03/11	Spring Break
03/18	MATLAB: Fundaments, range variables, build-in-functions <i>Lab Assignment : MATLAB 1</i>
03/25	MATLAB : Array and Matrix Computations, Simultaneous equations <i>Lab Assignment : MATLAB 2</i>
04/01	MATLAB: 2D Plotting - line , bar, pie <i>Lab Assignment : MATLAB 3</i>
04/08	Quiz 2: Matlab MATLAB: 3D Plotting - surface, mesh, contour, Curve fitting <i>Lab Assignment : MATLAB 4</i>
04/15	MATLAB: Input/Output statements, Programming with IF, AND, OR, NOT <i>Lab Assignment : MATLAB 5</i>
04/22	MATLAB: Programming with FOR loop, User-defined Functions <i>Lab Assignment : MATLAB 6</i>
04/29	FINAL EXAM (Matlab)