

EGN 3211 Engineering Analysis & Design  
Spring 2006

Instructor: Dr. Fernando Gonzalez  
Office: ENG1-211  
Office hours: Tuesdays and Thursdays 9:00AM to 12:00PM.  
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T.A.s Ilhan Kaya [ikaya@cs.ucf.edu](mailto:ikaya@cs.ucf.edu) (tutor)  
In the Harris Lab:  
    Tuesdays           2:15 to 4:15  
    Fridays             3:15 to 6:15

Ashfaq Hussain [ranger7799@yahoo.com](mailto:ranger7799@yahoo.com) (grader)

Text book: Al Kelley and Ira Pohl, "C by Dissection," 4<sup>th</sup> Ed. Addison Wesley, 1995.  
(Includes CodeWarrior, a C compiler and debugger).

Reference: Brian W. Kernigham and Dennis M Richie, "The C Programming Language," Prentice Hall, 1988.

Catalog: Engineering analysis and computation with structured constructs, subscripted variables, subprograms, input/output, batch processing and timesharing. Engineering applications will be emphasized.

Goals: This course is intended to provide the engineering student with a fundamental knowledge of digital computer operation and programming. Skills to be developed include basic engineering problem solving using computers and a programmers knowledge of the C programming language.

Topics:

- Introduction to Computers
- Computer Architecture
- Simple C Programs
- Characters and Text Processing
- Control Structures
- Arrays & Matrices
- Pointers
- Data Files
- Modular Programming
- Structures
- C++ objects

## Policies

- Grading: All exams and quizzes are closed book. One sheet of notes permitted.

HW	10 %
Exam 1	30 %
Exam 2	30 %
Exam 3	30 %

- The grades are determined by the following breakdown:

90 to 100	receives an A.
80 to 89.9	receives a B
70 to 79.9	receives a C
60 to 69.9	receives a D
0 to 59.9	receives an F

- In the event that you feel that I did not grade your exam, or part of it, fairly, I will gladly grade the entire exam again. However, the old grade will be replaced by the new grade even if it is lower.
- Note, regardless of where I draw the cut-off limit, there are always grades that fall very close to the boarder line (i.e. 79.5 %). Giving the students that are within a specified distance of the boarder the better grade is simply lowering the limit. There will still be grades that fall very close to the limit. This does not fix the problem. For example say a student earned a 79 % overall and says that he should get a B since he is within 1 %. If I give him the B then I must give all students in the range of 79 to 89.9 a B as well. I simple lowered the limit by 1 percent. Now a student with a grade of 78 will say that he is only within 1 % and I should give him a B. I therefore only shifted the problem. At some point I must stop moving the limit and simply be firm on the grades I give. I hope you understand the problem and do not ask me to give you the better grade with the justification that you are so close.
- I guarantee that the average grade for the class on all exams including quizzes will be no lower than 75%. If it is lower I will curve the grades to raise it to 75%. This does not include homework.
- You must save a copy of all the homework submitted in case that it gets lost.
- You may submit homework via email directly to the TA. Do not email it to me!

The homework must contain the following as appropriate:

1. program listing,
  2. program output,
  3. spreadsheet output
  4. answers to specific questions about results of an assignment
  5. cover sheet containing
- The cover sheet must contain:
    1. name,
    2. social security number and
    3. program (homework) number,
    4. description
  - The description part must contain:
    1. the homework/program requirements (including a table of all input data),
    2. how you approached the problem (e.g., equations employed, structure chart), and
    3. what was actually achieved, including a table of all appropriate output values (substantiated by printed program output attached to the cover sheet) and a discussion of the results (NOTE: even if you think/know there is something wrong that you did not have time to correct, you must discuss your results; e.g., how do you know it's wrong?, what did you try to correct it?). If spreadsheet output is used, you must identify and underline the name of the spreadsheet software used at the top of your spreadsheet output.
  - This description should be at least 150 words (you may handwrite any special characters, subscripts and algebraic expressions -- it's better to completely handwrite an expression than to type it partially and forget to handwrite the missing components) and at most one or two pages in length. If you wish, you may embed the entire cover sheet in comments at the beginning of your program, but use of a wordprocessing system is encouraged.
  - You should write your cover sheet under the assumption that it might be the only portion of a homework assignment which is graded. In other words, although your program listing, program output, spreadsheet output and other materials (e.g., algebraic details of a derivation which is referred to on the cover sheet) must be attached to the cover sheet, the grader should NOT have to consult these attachments -- EVERYTHING important should be summarized and discussed on the cover sheet.