

CE108 - Spring 2013

Introduction to Computational Methods in Civil Engineering

COURSE OUTLINE

WEEK	TOPICS
1/14,16	Basic Matlab and Mathematica commands.
1/23	Basic Input/Output (I/O) and Algebraic statements.
1/28,30	Basic data types and algebraic expressions.
2/4,6	File Input/Output (I/O) and logical expressions.
2/11,13	Loops and repetitive execution.
2/20	Iterative algorithms in applied mathematics.
2/25,27**	Matrix Operations.
3/4,6	Programming with functions and subprograms.
3/11,13	Global variables.
3/25,27	Introduction to UNIX and C-compilation.
4/1,3	Basic data types and integer arithmetic.
4/8,10	Basic I/O Operations and Introduction to Pointers.
4/15,17	Data representation and storage schemes.
4/22,24**	Assembler and Machine Languages.
4/29,5/1	Advanced topics.

** \Rightarrow examination on that day (2/27, 4/24).

Grading Policy:

2 equally weighted examinations (30% each)	60%
12 computer projects	30%
8 written homework on computer algorithms	10%

Reference Textbooks:

- Introduction to Scientific Computation and Programming, by Daniel T. Kaplan, Thomson/Brooks/Cole, ISBN 0-534-38913-9.
- The C Programming Language, Second Edition, by Brian W. Kernighan and Dennis M. Ritchie, Prentice Hall, ISBN 0-13-110362-8.

Warning: Not working on the computer projects can be hazardous to your examination scores.

Course Website: <http://www-classes.usc.edu/engr/ce/108>