

CE108 - Spring 2019

Introduction to Computational Methods in Civil Engineering

COURSE OUTLINE

WEEK	TOPICS
1/8,10	Basic Matlab and Mathematica commands.
1/15,17	Basic Input/Output (I/O) and Algebraic statements.
1/22,24	Basic data types and algebraic expressions.
1/29,31	File Input/Output (I/O) and logical expressions.
2/5,7	Loops and repetitive execution.
2/12,14	Iterative algorithms in applied mathematics.
2/19,21**	Matrix Operations.
2/26,28	Programming with functions and subprograms.
3/5,7	Global variables.
3/19,21	Introduction to UNIX and C-compilation.
3/26,28	Basic data types and integer arithmetic.
4/2,4	Basic I/O Operations and Introduction to Pointers.
4/9,11	Data representation and storage schemes.
4/16,18**	Assembler and Machine Languages.
4/23,25	Advanced topics.

** \implies examination on that day (2/21, 4/18).

Grading Policy:

2 equally weighted examinations (30% each)	60%
12 computer projects	24%
8 written homework on computer algorithms	16%

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>