UNIVERSITY OF CALIFORNIA, SANTA CRUZ
BOARD OF STUDIES IN COMPUTER ENGINEERING

CSE013E: COMPUTER SYSTEMS AND C PROGRAMMING
LECTURE CALENDAR

Readings are from "The C Programming Language, 2nd Edition" by Kernighan and Ritchie, Prentice-Hall, 1988, ISBN-10: 0131103628 [**K&R**].

"Notes to accompany K&R," by Steve Summit available on the class website and also available at: http://www.eskimo.com/~scs/cclass/krnotes/top.html [**Notes**]

Week	Readings for the Week
1 Intro, History, Tools, C Runtime, Heap/Stack, Hello World, Toolchain, C basics, Comments, Variables, Primitives, Header files	[Handout] Syllabus [Gonick] Parts 1-2 [K&R]: Chapter 1.1-1.2, 2.1, 4.5, 4.11.1
2 Expressions, If-statements, while loops, Functions, printf(), Scanf(), Arrays, Strings, Operators	[K&R]: Chapter 2.11, 3.1, 3.2, 3.5, 1.7, 4.1, 7.2, 7.4, 7.1, 1.6, 1.9, 5.7, 2.5-2.6 [Notes]:Same
3 Operators (cont'd), loops (cont'd), Unit testing, Pass by value, Pass by reference, Scope, Data lifetimes	[K&R]: 2.8-2.12, 1.3, 3.5, 3.6, 1.8, 4.2, 4.4, 4.8, 4.9, 4.6, 4.7 [Notes]: Same
4 Literals/Constants, Structs, typedef, Text input, String processing, Pointers	[K&R]: Chapter 1.4, 2.3, 6.1-6.4, 6.7, 7.7, 7.8.1, 5.1 [Notes]: Same
5 Pointers (cont'd), Dynamic memory, Dynamic memory (cont'd), Pointers (cont'd), Enums, Interrupts,	[K&R]: Chapter 5.2-5.5, 5.6-5.9, 7.8.5, 2.3 [Notes]: Same
6 Dynamic memory example, Implementing malloc() example, Hardware peripherals, Event-driven programming, Bit masking/flags	[Handout]: CKO Chapter 5.1-5.7 [K&R]: Chapter 4.6, 2.9, 6.9, 8.7 [Notes]: Same
7 Bitfields, Preprocessor, Switch statements, Switch statements (cont'd), State machines	[Handout]: CKO Chapter 5.8-5.10, Bit Manipulation handout [K&R]: Chapter 3.4, 4.11 [Notes]: Same
8 State machines (cont'd), Recursion, Binary Trees	[K&R]: Chapter 4.10, 7.8.5 [Notes]: Same
9 Recursion (cont'd), Software engineering, Random number generation, Encryption, Checksumming, Communications protocols	[Handouts]: Iterative software design [K&R]: Chapter 7.5, 7.8.7 [Notes]: Same
10 void pointers, Function pointers, Unions, variable argument lists, x86 programming, File I/O, File formats	[K&R]: Chapter 5.11-5.12, 6.8, 7.3, 7.5 [Notes]: Same