Planned Syllabus

This is what I plan to cover, and when. It will undoubtedly change as the quarter progresses. All readings are from the texts unless otherwise indicated. "*zy*" is the Programming in C zyBook, "*C Notes*" is the C Notes book. "*Shell*" is the shell text book. "§*n*" means chapter or section *n* of the named book. "[*n*]" means handout *n*. "*D*n" means discussion section *n*.

#	date	topic	readings
1.	Mar 31	Intro to UNIX/Linux and C; the CSIF	*Shell*, §1–4; [1, 7]
2.	Apr 2	Intro to C; quick overview of compiling	*zy*, §1; [3, 4]
3.	Apr 4	Overview of writing C programs on CSIF	*zy*, §2.20; [2]
D1.	*Disc sec*	Using *gradescope* and the CSIF;	
4.	Apr 7	Variables, basic types, arithmetic operators	*zy*, §2.1–2.9, 2.11–2.12; [5]
5.	Apr 9	Branching, relational operators, error handling	*zy*, §3.1–3.12, 3.16–3.19
6.	Apr 11	Loops	*zy*, §6, 12.1
D2.	*Disc sec*	UNIX utilities: grep, sort, uniq, head, *etc*.	
7.	Apr 14	Functions, writing programs	*zy*, §6.1–6.4
8.	Apr 16	More about functions	*zy*, §6.5–6.9
9.	Apr 18	Pointers	*zy*, §6.10–6.13, 8.1–8.2; [6]
D3.	*Disc sec*	UNIX utilities: shells, redirection, piping	*Shell*, §6, 7, 11, 13; [7]
10.	Apr 21	Pointers, arrays, basic macros	*zy*, §5.1–5.9, 5.14, 12.4, 6.16
11.	Apr 23	C arrays and strings, output with *printf*	*zy*, §5.10–5.13, 5.15
12.	Apr 25	C strings, recursion	*zy*, §10
D4.	*Disc sec*	UNIX utilities: find, *etc*.	*Shell*, §17
13.	Apr 28	More recursion	*zy*, §10
14.	Apr 30	Chars as integers, string functions, comma operator	*zy*, §5.10–5.15
15.	May 2	*midterm in class*	
D5.	*Disc sec*	Review for midterm	
16.	May 5	Input using *scanf*, file input and output	*zy*, §9; *Shell*, §12
17.	May 7	Arrays of strings, command line arguments	*zy*, §12.3, 12.9
18.	May 9	Structures, pointers to structures	*zy*, §7.1–7.4
D6.	*Disc sec*	Review midterm	
19.	May 12	Dynamic memory allocation	*zy*, §8.3, 8.6–8.7
20.	May 14	Linked lists, arrays of structures	*zy*, §8.10–8.12; *C Notes*, §11
21.	May 16	Static and dynamic debugging; using *gdb*	
D7.	*Disc sec*	*bash* shell scripts	*Shell*, §24–29
22.	May 19	Function pointers, unions, scope of variables	*zy*, §6.14; *C Notes*, §24
23.	May 21	Binary notation, bits and bit operations	*C Notes*, §9
24.	May 233	Unions and bits; C preprocessor	*C Notes*, §30, 56
D8.	*Disc sec*	More about *bash* shell scripts	*Shell*, §24–29
—.	May 26	*University holiday (Memorial Day); no class*	
25.	May 28	C library functions	
26.	May 30	More C library functions; more *gdb*	
D9.	*Disc sec*	Review midterm	
27.	Jun 2	Multi-file queues; how the C compiler works	
28.	Jun 4	Managing large programs	
D10.	*Disc sec*	Review for final	
—.	Jun 12	*Final Exam, 8:00am–10:00am*	

List of handouts on next page.

Handouts

1. Quick Guide to UNIX, *unix-quick.pdf*
2. *vim* Tutorial, *vim.pdf*
3. Compiling and Executing Your Program, *compiling.pdf*
4. Writing a Program, *writingprogram.pdf*
5. Precedence and Associativity of C Operators, *associativity.pdf*
6. Pointer stew, *ptrstew.pdf*
7. Processes and the Shell, *processes.pdf*