

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. “*C text*” is the C text book. “*Shell text*” is the shell text book. “§*n*” means chapter or section *n* of the named book. “[*n*]” means handout *n*. “*Dn*” means discussion section *n*.

#	date	topic	readings
1.	Sep 25	Intro to UNIX/Linux and C; compiling a C program	<i>Shell text</i> , §12, 23; [1–3]
2.	Sep 27	The CSIF; how to write a program/algorithms	<i>C text</i> , §3.1–3.3; [4]
<i>D–.</i>	<i>Disc sec</i>	<i>No discussion section this week</i>	
3.	Sep 30	C program basics, variables, arithmetic operators	<i>C text</i> , §2; [5]
4.	Oct 2	Relations, loops, basic error handling	<i>C text</i> , §4.1–4.5, 4.7–4.8, 5.1–5.8
5.	Oct 4	Input using <i>scanf</i> ; basic C programming	<i>C text</i> , §2.4
<i>D1.</i>	<i>Disc sec</i>	UNIX file system, commands	<i>Shell text</i> , §1–3, 9; [2]
6.	Oct 7	Program design	<i>C text</i> , §3.3, 4.6
7.	Oct 9	Introduction to functions	<i>C text</i> , §3.4–3.5, 6.4, 12.4
8.	Oct 11	Functions, scope; introduction to pointers	<i>C text</i> , §3.4–3.5, 6.1–6.5, 12.4
<i>D2.</i>	<i>Disc sec</i>	UNIX utilities: <i>grep</i> , <i>sort</i> , <i>uniq</i> , <i>head</i> , <i>etc.</i>	<i>Shell text</i> , §4, 5, 10
9.	Oct 14	Pointers and arrays	<i>C text</i> , §2.1, 7.1–7.6, [6]
10.	Oct 16	C strings and character representations	<i>C text</i> , §8
11.	Oct 18	Recursion	<i>C text</i> , §9
<i>D3.</i>	<i>Disc sec</i>	UNIX utilities: shells, redirection, piping	<i>Shell text</i> , §6, 7, 11, 19; [7]
12.	Oct 21	C strings, more on recursion	<i>C text</i> , §8, 9
13.	Oct 23	Still more recursion	<i>C text</i> , §8, 9
14.	Oct 25	Standard I/O Library	<i>C text</i> , §11
<i>D4.</i>	<i>Disc sec</i>	Review for midterm	
15.	Oct 28	midterm in class	
16.	Oct 30	Command-line arguments, environment variables	<i>C text</i> , §12.7; <i>Shell text</i> , §12
17.	Nov 1	Structures, unions, enums, other data types	<i>C text</i> , §10
<i>D5.</i>	<i>Disc sec</i>	UNIX utilities: <i>find</i> , <i>etc.</i>	
18.	Nov 4	C preprocessor	<i>C text</i> , §2.1, 12.6, 12.8
19.	Nov 6	<i>to be arranged</i>	
20.	Nov 8	System calls	
<i>D6.</i>	<i>Disc sec</i>	Review midterm	
—.	Nov 11	University holiday (Veterans Day); no class	
21.	Nov 13	Other libraries	<i>C text</i> , §12.1–12.3, 12.5
22.	Nov 15	Writing large programs, makefiles	
<i>D7.</i>	<i>Disc sec</i>	UNIX shell scripts	<i>Shell text</i> , §24–29
23.	Nov 18	Dynamic memory allocation	<i>C text</i> , §13.1–13.2
24.	Nov 20	Data structures: linked lists	<i>C text</i> , §13.3–13.7
25.	Nov 22	Data structures: binary trees	<i>C text</i> , §13.8
<i>D8.</i>	<i>Disc sec</i>	Memory management	
26.	Nov 25	Robust programming	[8]
27.	Nov 27	Robust programming	
—.	Nov 29	University holiday (Thanksgiving); no class	
<i>D–.</i>	<i>Disc sec</i>	<i>No discussion section this week</i>	
28.	Dec 2	<i>to be arranged</i>	
29.	Dec 4	<i>to be arranged</i>	
30.	Dec 6	Review for final; end of instruction	
<i>D9.</i>	<i>Disc sec</i>	Review for final	
—.	Dec 11	Final Exam, 1:00pm–3:00pm	

List of handouts on next page.

Handouts

1. Compiling and Executing Your Program, *compiling.pdf*
2. Quick Guide to UNIX, *unix-quick.pdf*
3. *vim* Tutorial *vim.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*
8. Robust Programming, *robust.pdf*