

Course map

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(Also note the official dates from the [Registrar's office](#) including add/drop dates and official holidays)

(All information subject to change)

Week	Lectures (~3 hours per week)	Lab (~1 hours per week)
1 - September 4 - 10	<ul style="list-style-type: none"> Topic 0 - Course introduction Topic 1 - Introduction to operating systems and Unix Topic 2 - Introduction to C 	
2 - September 11 - 17	<ul style="list-style-type: none"> Topic 3 - Unix basics Topic 4 - Unix editors Topic 5 - C fundamentals 	<ul style="list-style-type: none"> Lab 01 <ul style="list-style-type: none"> login and logout department network using Unix to create a directory and two files
3 - September 18 - 24	<ul style="list-style-type: none"> Topic 6 - Formatted IO Topic 7 - Files and directories 	<ul style="list-style-type: none"> Lab 02 <ul style="list-style-type: none"> use tar command to manipulate archives use sftp to transfer files create a small C program and compile
4 - September 25 - October 1	<ul style="list-style-type: none"> Topic 8 - Flow control in C (Selection statements and loops) Topic 9 - File security and permissions Topic 10 - Data types in C and Binary representation in computers 	<ul style="list-style-type: none"> Lab 03 <ul style="list-style-type: none"> Flow control in C
5 - October 2 - 8	<ul style="list-style-type: none"> Topic 11 - Memory maps in C (Arrays) Topic 12 - Function calls in C 	<ul style="list-style-type: none"> Lab 04 <ul style="list-style-type: none"> create new files and directories in Unix change their permission levels
6 - October 9 - 15	<ul style="list-style-type: none"> Topic 13 - Pointers in C 	<ul style="list-style-type: none"> Lab 05 <ul style="list-style-type: none"> Small programs in C that work with different data types
7 - October 16 - 22	<ul style="list-style-type: none"> Topic 14 - Unix command I/O and redirection Topic 15 - Processes and job control 	<ul style="list-style-type: none"> Lab 06 <ul style="list-style-type: none"> Arrays in C Functions in C
8 - October 23 - 29	<ul style="list-style-type: none"> Topic 16 - Regular expressions Topic 17 - Strings in C 	<ul style="list-style-type: none"> Lab 07 <ul style="list-style-type: none"> Exercise with the grep command
9 - October 30 - November 5 (Reading Week)		
10 - November 6 - 12	<ul style="list-style-type: none"> Topic 18 - Variables (scope) in C (Program organization) Topic 19 - Debugging 	<ul style="list-style-type: none"> Lab 08 <ul style="list-style-type: none"> gdb
11 - November 13 - 19	<ul style="list-style-type: none"> Topic 20 - Structure types in C Topic 21 - The Preprocessor Topic 22 - Writing large programs 	<ul style="list-style-type: none"> Lab 09 <ul style="list-style-type: none"> Working with the String library
12 - November 20 - 26	<ul style="list-style-type: none"> Topic 23 - Shell environments Topic 24 - Shell programming Topic 25 - Memory allocation (Advanced uses of pointers) Topic 26 - Linked lists and other advanced uses of pointers 	<ul style="list-style-type: none"> Lab 10 <ul style="list-style-type: none"> Shell programming
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13 - November 27 - December 3	<ul style="list-style-type: none">• Topic 27 - Declarations• Topic 28 - Compiler directives in C• Topic 29 - Low Level programming	<ul style="list-style-type: none">• Lab 11<ul style="list-style-type: none">◦ Practice with command I/O, redirection, job control, etc	<ul style="list-style-type: none">• Assign
14 - December 4 - 10	<ul style="list-style-type: none">• Topic 30 - The Standard Library• Topic 31 - Interacting with Unix files in C (Input/Output)	<ul style="list-style-type: none">• Lab 12<ul style="list-style-type: none">◦ Amend code to read and write to an external file in C	
Exam period			