

CPSC 213 Course Learning Goals

After this class students can...	Be a better programmer because, you will have a deeper understanding of the features of a programming language in order to be able to a) understand in detail how your programs are executed, b) be able to more easily learn new programming languages and c) be able evaluate design tradeoffs in considering languages most appropriate for solving a given problem.	Appreciate that system design is a complex set of tradeoffs which, while are important to be able to analyze will not have exactly one optimal answer (while there are often many sub-optimal answer). Tradeoffs exist at a range of levels including the hardware level, programming language level, etc. Experience with these tradeoffs prepares the student to deal with tradeoffs in desin in real world programming scenarios.	Develop distinctions between the static and dynamic components of programs and systems and be able to describe their implications.	Utilize synchronization primitives to control interaction in various situations including among processes, threads, and networked communication.	Understand how computing systems work including networking.
ALU/Registers/Memory	A1				A1
Machine Level Instructions	B1, B2, B6	B6	B1, B6		B2, B3, B4, B5, B7
ISA Design		C1, C2, C3, C4			
Variables	D1, D2, D3	D1	D1, D2, D3		
Flow of Control	E4, E5, E6	E5, E6	E3, E4		E1, E2, E3, E5
Language Design and Tradeoffs	F1, F2, F3, F4	F1, F2, F3, F4, F5, F7, F8, F9	F1, F3		F4, F7
External Devices		G1			G1
Devices and Files	H1, H8	H1, H4, H7			H1, H2, H3, H5, H8
Networking	I2, I3			I2, I3	I1, I4
Processes	J12, J13	J2,		J6, J7, J8, J9, J10	J1, J2, J3, J4, J6, J9
Java and C comparative understanding*	K1, K2, K3, K4, K6, K7, K8, K10, K11	K6, K8, K9, K10			K5, K9