

# COMPUTER SCIENCE BS PATHWAY (with MATH 007)

Total Units Required: 190 units

## Required Course Listings

This breakdown shows a Computer Science BS Pathway to be completed in 4 years at La Sierra University. All courses with a star (\*) indicate a prerequisite or multiple prerequisites for the class. Courses with a dagger (†) are only offered in years ending with an odd number (e.g. 2022-2023 school year) and courses with a double dagger (‡) are only offered in years ending with an even number (e.g. 2023-2024 school year). By following the suggested/required sequencing all necessary prerequisite courses will be fulfilled. Please consult the Bulletin, Records, or your Guided Pathways Advisor for more information about prerequisites.

Major Requirements (75 units)		
Course	Course Title	Units
CPTG 121	Introduction to Computer Science I*	4
CPTG 122	Introduction to Computer Science II*	4
CPTG 244	Data Structures*	4
CPTG 245	Computer Organization & Assembly Language Programming*	4
CPTG 255	Systems & Network Programming*	4
CPTG 324	Programming Languages*†	4
CPTG 434	Operating Systems*‡	4
CPTG 445	Computer Architecture*‡	4
CPTG 485	Seminar*	1
CPTG 485-SL	Seminar (with Service Learning)*‡	1
MATH 276	Discrete Math*‡	4
CPTG 3/400	Computer Science Upper Division Elective*	12
CPTG 334	Systems Analysis*†	4
CPTG/C X00	Computer Science Cognate Elective	8
MATH 131	Calculus I*	4
BIOL 111	General Biology I*	4
BIOL 111L	General Biology I Lab*	1
PHYS 117	Introduction to Physics	4
PHYS 117L	Introduction to Physics Lab	0

General Education Requirements (115 units)		
Course	Course Title	Units
UNST 101	First Year Seminar	3
ENGL 111	College Writing I	3
ENGL 112	College Writing II*	3
ENGL 113	College Writing III*	3
MATH 121	College Algebra	4
WDLG 151	World Language I	4
WDLG 152	World Language II*	4
WDLG 153	World Language III*	4
HLSC 120	Lifetime Fitness	2
SSCI 20X-SL	SSCI Theme Course (with Service Learning)	4
THM1 X00	Theme I Elective	4
HUMN 10X	HUMN Theme Course	4
THM2 X00	Theme II Elective	8
RLGN 304	Adventism in Global Perspective*	4
RELB X00	Theme IIIBiii - Scripture Elective	4
THM3 3/400	Theme III Elective Upper Division*	4
THM3 X00	Theme III Elective	4
NSCI 40X	NSCI Theme Course*	4
UNST 404U-SL	Senior Seminar: Religion, Values & Social Responsibility (with Service Learning)*	4
MATH 122	Trigonometry & Analytical Geometry*	4
elct 3/400	Upper Division Elective	18
elct X00	Elective	19

## Sequencing

Computer Science BS Pathway in 4 years and 1 quarter at La Sierra University starting in Fall 2021 or Fall 2023.

Year 1			Year 1			Year 1		
Fall Quarter (14 units)			Winter Quarter (16 units)			Spring Quarter (16 units)		
Course	Course Title	Units	Course	Course Title	Units	Course	Course Title	Units
ENGL 111	College Writing I	3	PHYS 117	Introduction to Physics	4	MATH 122	Trigonometry & Analytical Geometry*	4
HLSC 120	Lifetime Fitness	2	PHYS 117L	Introduction to Physics Lab	0	ENGL 113	College Writing III*	3
MATH 007	Introductory Algebra	4	MATH 121	College Algebra	4	UNST 101	First Year Seminar	1
UNST 101	First Year Seminar	1	ENGL 112	College Writing II*	3	THM1 X00	Theme I Elective	4
HUMN 10X	HUMN Theme Course	4	UNST 101	First Year Seminar	1	THM3 X00	Theme III Elective	4
			THM2 X00	Theme II Elective	4			
Year 2			Year 2			Year 2		
Fall Quarter (16 units)			Winter Quarter (12 units)			Spring Quarter (16 units)		
Course	Course Title	Units	Course	Course Title	Units	Course	Course Title	Units
CPTG 121	Introduction to Computer Science I*	4	CPTG 122	Introduction to Computer Science II*	4	CPTG 244	Data Structures*	4
CPTG/C X00	Computer Science Cognate Elective	4	WDLG 152	World Language II*	4	WDLG 153	World Language III*	4
MATH 131	Calculus I*	4	SSCI 20X-SL	SSCI Theme Course (with Service Learning)	4	RELB X00	Theme IIIBiii - Scripture Elective	4
WDLG 151	World Language I	4				THM2 X00	Theme II Elective	4
Year 3			Year 3			Year 3		
Fall Quarter (13.5 units)			Winter Quarter (16 units)			Spring Quarter (13 units)		
Course	Course Title	Units	Course	Course Title	Units	Course	Course Title	Units
CPTG 245	Computer Organization & Assembly Language Programming*	4	CPTG 255	Systems & Network Programming*	4	CPTG 445	Computer Architecture*‡	4
CPTG 485	Seminar*	0.5	CPTG/C X00	Computer Science Cognate Elective	4	CPTG 485-SL	Seminar (with Service Learning)*‡	1
BIOL 111	General Biology I*	4	RLGN 304	Adventism in Global Perspective*	4	MATH 276	Discrete Math*‡	4
BIOL 111L	General Biology I Lab*	1	elct 3/400	Upper Division Elective	4	elct 3/400	Upper Division Elective	4
elct X00	Elective	4						
Year 4			Year 4			Year 4		
Fall Quarter (15.5 units)			Winter Quarter (16 units)			Spring Quarter (16 units)		
Course	Course Title	Units	Course	Course Title	Units	Course	Course Title	Units
CPTG 485	Seminar*	0.5	CPTG 3/400	Computer Science Upper Division Elective*	4	CPTG 324	Programming Languages*†	4
CPTG 3/400	Computer Science Upper Division Elective*	4	CPTG 334	Systems Analysis*†	4	CPTG 3/400	Computer Science Upper Division Elective*	4
elct 3/400	Upper Division Elective	4	UNST 404U-SL	Senior Seminar: Religion, Values & Social Responsibility (with Service Learning)*	4	NSCI 40X	NSCI Theme Course*	4
elct X00	Elective	7	elct X00	Elective	4	elct X00	Elective	4

Year 5		
Fall Quarter (14 units)		
Course	Course Title	Units
CPTG 434	Operating Systems*‡	4
THM3 3/400	Theme III Elective Upper Division*	4
elct 3/400	Upper Division Elective	6