

Computer Science ADT to BS - Computer Science

Title	C-ID Designation	C-ID Units	Double	CSUEB Course	Units
Programming Concepts & Methodology I (CS1)	COMP 122	3			
Programming Concepts & Methodology II (CS2)	COMP 132	3			
Computer Architecture & Organization	COMP 142	3			
Discrete Structures	COMP 152	3			
Choose 1					
Single Variable Calculus I and II – Early Transcendentals (min. 8 units)		8			
or					
Single Variable Calculus I and II – Late Transcendentals (min. 8 units)		8			
or	MATH 210 and 220	8			
Single Variable Calculus Sequence (min. 8 units)					
or					
MATH 211 and 221		8			
or					
MATH 900S					
Choose 1					
PHYS 205	4				
	4				
(min. 4 units)					
or					
Cell and Molecular Biology		4			
(min. 4 units)					
or					
Organismal Biology		4			
Choose 1					
PHYS 210		4			
General Chemistry for Science Majors I, with Lab (min. 5 units)					
or					
BIOL 190					
or					
BIOL 140					
or					
CHEM 110					
TOTAL MAJOR UNITS		28			
CSU GE Requirements		39			
Double Counting GE		7			
Elective		0			
Total Units		60			

GRADUATION REQUIREMENTS These should be fulfilled at the Community College, however if not taken at the Community College, they must be completed at CSU East Bay			
US History, Constitution & American Ideals			
First Category US-1			0-3
Second Category US-2			0-3
Third Category US-3			0-3
		Total Units	0-9
These courses must be taken at CSU East Bay			
Please note: A minimum of three courses in the Upper Division General Education pattern must have a topic/learning outcome oriented toward one of the following topic areas (overlays): Diversity (DIV) , Social Justice (SJ) , or Sustainability (S) .			
Upper Division GE/Overlay	Courses	Overlay	Units
GE-UD-B			3
GE-UD-C			3
GE-UD-D			3
		Total Units	9
University Writing Requirement	Course	GE/Overlay	Units
UWR			
		Total Units	3
Lower Division Coursework	Course	GE/Overlay	Units
CS 230	Computing and Social Responsibility	GE-D1-2	3
		Total Units	3
Upper Division Coursework	Course	GE/Overlay	Units
Students must complete all 27 units of upper-division courses with a grade of C- or above:			
CS 301	Data Structures and Algorithms		3
CS 311	Programming Language Concepts		3
CS 321	Computer Architecture		3
CS 401	Software Engineering		3
CS 411	Automata and Computation		3
CS 413	Analysis of Algorithms		3
CS 421	Operating Systems		3
CS 441	Computer Networks		3
STAT 316	Statistics and Probability for Science and Engineering		3
		Total Units	27
Computer Science Breadth Coursework			
Students must complete two (2) courses of the following for 6 units:			
CS 351	Website Development		3
CS 431	Database Architecture		3
CS 453	Mobile Programming		3
CS 455	Computer Graphics		3
CS 461	Artificial Intelligence		3
CS 471	Security and Information Assurance		3
		Total Units	6

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Elective Courses			
Students must take two (2) courses with the CS prefix numbered 300 or above for a minimum of 6 units. Courses must not be the same as those already used. Note: 1-3 units of CS 498 Internship and/or 1-4 units of CS 490 Independent Study and/or CS 497 Topics in Computer Science may be used to fulfill the Electives category.			
		Total Units	6
ADDITIONAL COURSE(S) to MEET 60 UNITS		GE/Overlay	Units
These courses may be additional major courses or prerequisites taken at the Community College.			
Free Elective Elective			6
		Total Units	6
		Grand Total:	60

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FIRST SEMESTER (FALL)			
UD Major	CS 301	Data Structures and Algorithms	3
UD Major	CS 311	Programming Language Concepts	3
UD Major	CS 321	Computer Architecture	3
UD Major	Stat 316	Statistics for Science & Engineering	3
	UWR		3
		Total:	15
SECOND SEMESTER (SPRING)			
UD Major	UD-Elective/Breadth	UD-Elective or UD-Breadth	3
UD Major	CS 411	Automata and Computation	3
UD Major	CS 401	Software Engineering	3
UD Major	CS 230	Computing and Social Responsibility	3
UD-C/Overlay			3
		Total :	15
THIRD SEMESTER (FALL)			
UD Major	CS 413	Analysis of Algorithms	3
UD Major	CS 421	Operating Systems	3
UD Major	UD-Elective/Breadth	UD-Elective or UD-Breadth	3
UD-B/Overlay			3
Free Elective			3
		Total:	15
FOURTH SEMESTER (SPRING)			
UD Major	UD-Elective/Breadth	UD-Elective or UD-Breadth	3
UD Major	UD-Elective/Breadth	UD-Elective or UD-Breadth	3
UD Major	CS 441	Computer Networks	3
UD-D/Overlay			3
Free Elective			3
		Total:	15
		Grand Total:	60