COMPUTER SCIENCE ADT TO COMPUTER SCIENCE B.S.

ADT Computer Science – 60 Sem. Units	Sem. Units	Community College Courses
CSUGE or IGETC	**39**	*CSU general education certification requires completion of all requirements in Areas A through E, approximately 39 units*
AREA D REQUIREMENT: **US History, Constitution & American Ideals Code Requirement**	3-9	**US-1:** **US-2:** **US-3:**
Diversity/Social Justice/Sustainability *Can be fulfilled in area C or D*	3-9	**DIV:** **SJ:** **SUS:**
Second Composition (Comp II) Can be fulfilled with A3 Any Composition course with ENGL 100 as a prerequisite	3	
The following areas are for the CID TMC/Courses and matching Community College Courses		
Major Core (C-ID)		**Community College Courses**
COMP 122 Programming Concepts & Methodology I		
COMP 132 Programming Concepts & Methodology II		
COMP 142 Computer Architecture & Organization		
COMP 152 Discrete Structures		
MTH 210 and 220 Single Variable Calculus I and II – Early Transcendentals or MATH 211 and 221 Single Variable Calculus I and II – Late Transcendentals or MATH 900S Single Variable Calculus Sequence		
PHYS 205 Calculus-Based Physics for Scientists and Engineers: A		
PHYS 210 Calculus-Based Physics for Scientists and Engineers: B or BIOL 190 or 140 Cell and Molecular Biology or CHEM 110 General Chemistry for Science Majors I, with Lab		*PHYS 210 – Recommended by CS Department
Electives/Major Prerequisites for CSUEB		
If needed		
Total Units Computer Science ADT	**60**	

PLEASE NOTE: This page assumes Semester Units.

COMPUTER SCIENCE ADT TO COMPUTER SCIENCE B.S.

CSUEB: Computer Science B.S. *Complete Degree in 60 Semester Units*	**Semester UNITS**	**NOTES**
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	**0-9**	
1) First Category US-1	0-3	
2) Second Category US-2	0-3	
3) Third Category US-3	0-3	
These courses must be taken at CSU East Bay		
Upper Division GE *See catalog*	**9**	**CSUEB COURSES**
Please note: A minimum of three courses in the Upper Division General Education pattern may have a topic/learning outcome oriented toward one of the following topic areas (overlays): **Diversity, Social Justice, or Sustainability**.		
Area B6 Upper Division Science course	3	**Course:** **OVERLAY:**
Area C4 Upper Division Humanities course	3	**Course:** **OVERLAY:**
Area D4 Upper Division Social Sciences course	3	**Course:** **OVERLAY:**
Lower Division Coursework	**3**	
CS 230 - Computing and Social Responsibility		*G.E./G.R. Area: D1-3*
MATH 225 -Numerical Algorithms and Linear Algebra for Computer Science		
Upper Division Coursework	**27**	
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	
Computer Science Breadth Coursework Students must complete two courses of the following for 6 units:	**6**	
CS 351 - Website Development		
CS 431 - Database Architecture		
CS 453 - Mobile Programming		
CS 455 - Computer Graphics		
CS 461 - Artificial Intelligence		
CS 471 - Security and Information Assurance		
Major Elective Courses	**6**	
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 Cooperative Education and/or 1-3 units of CS 490 Independent Study may be used to fulfill the Electives category.***		
ADDITIONAL COURSE to reach 60 Units	**6**	*These courses may be additional Major Courses or prerequisites not taken at the Community College*
If needed		
Total Semester Units at CSUEB	**60**	**60**

COMPUTER SCIENCE ADT TO COMPUTER SCIENCE B.S.

FIRST SEMESTER JUNIOR YEAR			
Register to take the University Writing Skills Requirement			
UDGE B6	Course:	Overlay	3
LD MAJOR	CS 230	Computing and Social Responsibility	3
UD MAJOR	CS 301	Data Structures	3
LD MAJOR	MATH 225	Numerical Algorithms and Linear Algebra for Computer Science	3
UD MAJOR	STAT 316	Statistics for Science & Engineering	3
		TOTAL:	***15***
SECOND SEMESTER JUNIOR YEAR			
TAKE THE UNIVERSITY WRITING SKILLS TEST			
UDGE D4	Course:	Overlay	3
UD MAJOR	CS 311	Programming Language Concept	3
UD MAJOR	CS 321	Computer Architecture	3
UD MAJOR	CS 413	Analysis of Algorithms	3
ELECTIVE			3
		TOTAL:	***15***
THIRD SEMESTER SENIOR YEAR			
Verify that you have completed the University Writing Skills Requirement. Check your MyCSUEB "Degree Audit Report" (DAR) and email any discrepancies to The ADT ADVISER.			
UDGE C4	Course:	Overlay	3
UD MAJOR	CS 401	Software Engineering	3
UD MAJOR	CS 411	Automata and Computation	3
UD MAJOR	CS 421	Operating Systems	3
UD MAJOR	CS Breadth		3
		TOTAL:	***15***
FOURTH SEMESTER SENIOR YEAR			
See the ADT ADVISER and apply for graduation through MyCSUEB by the posted deadline, available at Important Dates			
UD MAJOR	CS 441	Computer Networks	3
UD MAJOR	CS Breadth		3
MAJOR ELECT	CS Elective		3
MAJOR ELECT	CS Elective		3
ELECTIVE			3
		TOTAL:	***15***
		GRAND TOTAL:	**60**