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 outcomeoriented 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**

Introductory Co	Course	GE/Overlay	Units
Basic lower-division requirements for 9-10 units.			
Select one (1) of the following (CS 100 is recommended for Data Science Concentration):			
CS 100*	Programming for Everyone		3
MATH 130*	Calculus I	GE-B4	4
Select two (2) courses from the following (CS 200 is recommended for Data Science Concentration):			
CS 200*	Advanced Programming for Everyone		3
MATH 131*	Calculus II		3
STAT 303	Statistical Methods in Biology		3
*Completeted at a CCC		**Total Units**	**0-10**

Advanced Core	Course	GE/Overlay	Units
The following courses for 24 units are required as outlined below:			
Take all of the following:			
STAT 330	Statistical Inference		3
STAT 331	Introduction to Analysis of Variance		3
STAT 432	Introduction to Linear Regression and Logistic Regression		3
STAT 495	Data Analysis with SAS		3
Select one (1) of the following (STAT 321 recommended for Data Science Concentration):			
STAT 320	Introduction to Probability Theory I		3
STAT 321	Probability Through Simulation		3
Select three (3) Elective Courses from the following:			
STAT 351	Sampling Procedures for Surveys		3
STAT 450	Introduction to R for Data Science (Cannot be double-counted for students in the Data Science Concentration)		3
STAT 451	Introduction to Data Visualization (Cannot be double-counted for students in the Data Science Concentration)		3
STAT 452	Introduction to Statistical Learning (Cannot be double-counted for students in the Data Science Concentration)		3
STAT 460	Advanced Statistical Package Usage		3
STAT 473	Introduction to Nonparametric Statistics		3
STAT 474	Introduction to Time Series and Forecasting		3
STAT 475	Introduction to Stochastic Processes		3
STAT 481	Bayesian Statistics		3
		Total Units	**24**

Data Science Concentration			
Complete fifteen (15) units of approved courses in Computer Science and/or Statistics as follows:			
STAT 450	Introduction to R for Data Science		3
STAT 451	Introduction to Data Visualization		3
STAT 452	Introduction to Statistical Learning		3
An additional approved course in Computer Science or Statistics			3
A second approved course in Computer Science or Statistics			3
		Total Units	**15**

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			9
		Total Units	**9**
		Grand Total:	60

FIRST SEMESTER JUNIOR YEAR (FALL)			
UDGE UD-B	COURSE:	OVERLAY:	3
UD Major	STAT 330	Statistical Interference	3
*UD Major OR UD Elective	STAT 320	Introduction to Probability Theory I	3
CONCENTRATION			3
UWR			3
		TOTAL:	***15***
SECOND SEMESTER JUNIOR YEAR (SPRING)			
UDGE UD-D	COURSE:	OVERLAY:	3
UD Major	STAT 331	Introduction to Analysis of Variance	3
UD Major	STAT 432	Introduction to Linear Regression and Logistic Regression	3
*UD Major OR UD Elective	STAT 321	Probability Through Simulation	3
UD Elective			3
		TOTAL:	***15***
THIRD SEMESTER SENIOR YEAR (FALL)			
Check your MyCSUEB "Degree Audit Report" (DAR) and email any discrepancies to The ADT ADVISOR.			
UDGE UD-C	COURSE:	OVERLAY:	3
UD Major	STAT 495	Data Analysis with SAS	3
UD Elective			3
CONCENTRATION	STAT 450	Introduction to R for Data Science	3
CONCENTRATION	STAT 451	Introduction to Data Visualization	3
		TOTAL:	***15***
FOURTH SEMESTER SENIOR YEAR (SPRING			
See the ADT ADVISOR and apply for graduation through MyCSUEB by the posted deadline, available at Important Dates			
CONCENTRATION	STAT 452	Introduction to Statistical Learning	3
CONCENTRATION			3
FREE ELECT			3
FREE ELECT			3
FREE ELECT			3
		TOTAL:	***15***
		GRAND TOTAL:	**60**