

**COMPUTER SCIENCE ADT TO CSU EAST BAY BUSINESS ANALYTICS BS  
INFORMATION SYSTEM AND SUPPLY CHAIN ANALYTICS CONCENTRATION ROADMAP**

ADT Computer Science – 60 Sem. Units	Sem. Units	Community College Courses
<b>CSUGE or IGETC</b>	<b>39</b>	<i>CSU general education certification requires completion of all requirements in Areas A through E, approximately 39 units</i>
<b>AREA D REQUIREMENT:</b> <a href="#">US History, Constitution &amp; American Ideals Code Requirement</a>	3-9	<b>US-1:</b> <b>US-2:</b> <b>US-3:</b>
<a href="#">Diversity/Social Justice/Sustainability</a> <i>Can be fulfilled in area C or D</i>	3-9	<b>DIV:</b> <b>SJ:</b> <b>SUS:</b>
Second Composition (Comp II) Any Composition course with ENGL 100 as a prerequisite	3	
<i>The following areas are for the CID TMC/Courses and matching Community College Courses</i>		
<b>Required Core (C-ID)</b>	<b>7</b>	<b>Community College Courses</b>
COMP 152 Discrete Structures	<b>3</b>	
MATH 210 Single Variable Calculus I - Early Transcendentals (4 units) or MATH 211 Single Variable Calculus I - Late Transcendentals (4 units) or Any math course that is articulated preparation for the business analytics major at CSUEB	<b>4 Counted in GE</b>	
<b>LIST A: Choose 1 course</b>	<b>3</b>	
COMP 122 Programming Concepts & Methodology I	<b>3</b>	
Any programming course that is articulated preparation for the business analytics major at CSUEB	<b>3</b>	
<b>Lower Division Electives</b>	<b>15</b>	
Any five (5) courses that are articulated preparation for the business analytics major at CSUEB	<b>15</b>	
<b>Total Units ADT *COMPUTER SCIENCE*</b>	<b>60</b>	

**PLEASE NOTE: This page assumes Semester Units.**

**COMPUTER SCIENCE ADT TO CSU EAST BAY BUSINESS ANALYTICS BS  
INFORMATION SYSTEM AND SUPPLY CHAIN ANALYTICS CONCENTRATION ROADMAP**

<b>CSUEB: B.S. BUSINESS ANALYTICS</b> <i>Complete Degree in 60 Semester Units</i>	<b>Semester UNITS</b>	<b>NOTES</b>
<b>GRADUATION REQUIREMENTS</b> <i>These should be fulfilled at the Community College, however if not taken at the Community College, they must be completed at CSU East Bay</i>		
<b>US History, Constitution &amp; American Ideals</b>	<b>0-9</b>	
1) First Category US-1	0-3	
2) Second Category US-2	0-3	
3) Third Category US-3	0-3	
<b>These courses must be taken at CSU East Bay</b>		
<b>Upper Division GE</b> <i>See catalog</i>	<b>9</b>	<b>CSUEB COURSES</b>
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): <b>Diversity, Social Justice, or Sustainability.</b>		
Area B6 Upper Division Science course	3	<b>Course: BAN 320</b> <b>OVERLAY: Sustainability</b>
Area C4 Upper Division Humanities course	3	<b>Course:</b> <b>OVERLAY:</b>
Area D4 Upper Division Social Sciences course	3	<b>Course: MKTG 305</b> <b>OVERLAY:</b>
<b>Upper Division Major Core</b>	<b>24</b>	
BAN 310 Data Analysis with Python I	3	Prerequisites: will change to CS 100 or ITM 330 (currently MATH 130 and CS 100)
BAN 315 Data Analysis with Python II	3	Prerequisites: BAN 310
BAN 320 Optimization and Simulation for Business Applications	UD GE	G.E./G.R. Area: B6; Sustainability; Prerequisites: CS 100 (or CS 101)
BAN 331 Database Management and SQL	3	Prerequisites: BAN 310 or ITM 300
BAN 340 Machine Learning for Business Applications	3	Prerequisites: BAN 315
BAN 350 Data Wrangling and Data Pipeline	3	Prerequisites: BAN 310
MKTG 305 Business Communication	UD GE	G.E./G.R. Area: D4; UWSR Prerequisites: Junior standing
BAN 449 Big Data Technology and Business Applications	3	Prerequisites: BAN 315 or ITM 330
BAN 441 Business Data Visualization and Reporting	3	Social Justice Prerequisites: BAN 310 or ITM 300
<b>Concentration Required Courses</b>	<b>6</b>	
MGMT 364 Global Supply Chain Management	3	Diversity
ITM 336 Information Systems Development and Management	3	Prerequisites: BAN 310 or ITM 300
<b>Concentration Elective Courses</b> Choose four (4) courses	<b>12</b>	
ITM 446 Information Security		
MGMT 450 Project Management		
MGMT 455 AI Enabled Supply Chain and Logistics Analytics		
ITM 338 Cloud Computing and E-Commerce		
MGMT 365 Enterprise Resource Planning and Control		
MGMT 460 Healthcare Analytics		

**COMPUTER SCIENCE ADT TO CSU EAST BAY BUSINESS ANALYTICS BS  
INFORMATION SYSTEM AND SUPPLY CHAIN ANALYTICS CONCENTRATION ROADMAP**

MGMT 465 Supply Chain Forecasting with Machine Learning		
ITM 445 Blockchain and Smart Contract		
CS 461 Artificial Intelligence		CS 301
<b>Capstone</b>	<b>3</b>	
BAN 499 Capstone Seminar	3	BAN 340 and BAN 441
<b>Upper Division Free Elective</b>	<b>12</b>	
Complete twelve (12) units of Upper Division statistics, computer science, or business courses		
<b>Total Semester Units at CSUEB</b>	<b>60</b>	<b>60</b>

**COMPUTER SCIENCE ADT TO CSU EAST BAY BUSINESS ANALYTICS BS  
INFORMATION SYSTEM AND SUPPLY CHAIN ANALYTICS CONCENTRATION ROADMAP**

<b>FIRST SEMESTER JUNIOR YEAR</b>			
<b>Register to take the University Writing Skills Requirement</b>			
<b>UDGE C4</b>	<b>COURSE:</b>	<b>OVERLAY:</b>	<b>3</b>
UD Major Core	BAN 310	Data Analysis with Python I	3
UD Major Core	BAN 315	Machine Learning for Business Analytics	3
UD Major Core	CS TBD		3
UD Major Core	MKTG 305	Business Communication	3
		<b>TOTAL:</b>	<b>15</b>
<b>SECOND SEMESTER JUNIOR YEAR</b>			
<b>TAKE THE UNIVERSITY WRITING SKILLS TEST</b>			
Major Core/UDGE B6 /Sustainability	BAN 320	Optimization and Simulation for Business Applications	3
UD Major Core	BAN 331	Database Management and SQL	3
UD Major Core	BAN 340	Machine Learning for Business Applications	3
UD Major Core	BAN 350	Data Wrangling and Data Pipeline	3
Concentration /Diversity	MGMT 364	Global Supply Chain Management	3
		<b>TOTAL:</b>	<b>15</b>
<b>THIRD SEMESTER SENIOR YEAR</b>			
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.			
Concentration	ITM 336	Information Systems Development and Management	3
UD Major Core /Social Justice	BAN 441	Business Data Visualization and Reporting	3
UD Major Core	BAN 449	Big Data Technology and Business Applications	3
Concentration Elect		Choose 1 from Elect List	3
Concentration Elect		Choose 1 from Elect List	3
		<b>TOTAL:</b>	<b>15</b>
<b>FOURTH SEMESTER SENIOR YEAR</b>			
See the ADT ADVISER and apply for graduation through MyCSUEB by the posted deadline, available at Important Dates			
UD Free Elective		Choose 1 UD statistics, computer, or business course	3
Concentration Elect		Choose 1 from Elect List	3
Concentration Elect		Choose 1 from Elect List	3
Major Capstone	BAN 499	Capstone Seminar	3
UD Free Elective		Choose 1 UD statistics, computer, or business course	3
		<b>TOTAL:</b>	<b>15</b>
<b>GRAND TOTAL:</b>			<b>60</b>