Methodology I (CS1)	Computer Science ADT to Business Analytics B.S.							
Methodology I (CS1)	Title	C-ID Designation	C-ID Units	Double	CSUEB Course	Units		
Methodology II (CS2)	Programming Concepts & Methodology I (CS1)	COMP 122	3					
Organization COMP 142 3 Discrete Structures COMP 152 3 Choose 1 Single Variable Calculus I and II – Early Transcendentals (min. 8 units) 8 4 Choose 1 Single Variable Calculus I and II – Late Transcendentals (min. 8 units) 8 4 Choose 1 Single Variable Calculus I and II – Late Transcendentals (min. 8 units) 8 4 Choose 1 Single Variable Calculus Sequence (min. 8 units) 9 7 Choose 1 Chem 100 S 8 4 Choose 1 Chem 100 S 8 4 Choose 1 Chem 100 S 8 5 Choose 1 Choose 1 Chem 100 S 8 5 Choose 1 Choose 1 Chem 100 S 8 Choose 1 Choose 1 Choose 1 Chem 100 S 8 Choose 1 Choose 1 Chem 100 S 8 Choose 1 Chem 100 S	Programming Concepts & Methodology II (CS2)	COMP 132	3					
Discrete Structures	Computer Architecture & Organization	COMP 142	3					
Choose 1 Single Variable Calculus I and II - Early Transcendentals (min. 8 units) or Single Variable Calculus I and II - Late Transcendentals (min. 8 units) or MATH 210 and 220 8 4 or Single Variable Calculus Sequence (min. 8 units) or MATH 211 and 221 8 4 or MATH 211 and 221 8 4 or MATH 900S 8 4 Or MATH 900S 8 4 Or Cell and Molecular Biology or Cell and Molecular Biology Or Granismal Biology Choose 1 PHYS 210 PH	Discrete Structures	COMP 152	3					
Single Variable Calculus I and - Early Transcendentals (min. 8 units) 8								
Single Variable Calculus I and II – Late Transcendentals (min. 8 units) 8 4 or MATH 210 and 220 8 4 Single Variable Calculus Sequence (min. 8 units) Sequence (min. 8 units) 8 4 or MATH 211 and 221 8 4 or MATH 900S 8 4 Choose 1 PHYS 205 4 4 or Cell and Molecular Biology 4 4 or PHYS 205 4 4 Organismal Biology 4 4 4 Choose 1 PHYS 210 4 4 General Chemistry for Science Majors I, with Lab (min. 5 units) 0r 3-4 0r BIOL 190 3-4 0r 3-4 0r BIOL 140 3-4 0r 3-4 0r CHEM 110 3-4 3-4 0r 3-4 0r TOTAL MAJOR UNITS 28 39 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <td>Single Variable Calculus I and II – Early Transcendentals (min. 8 units)</td> <td></td> <td>8</td> <td>4</td> <td></td> <td></td>	Single Variable Calculus I and II – Early Transcendentals (min. 8 units)		8	4				
II - Late Transcendentals (min. 8 units)	or							
Single Variable Calculus Sequence (min. 8 units) MATH 211 and 221 8 4 or MATH 900S 8 4 Choose 1 PHYS 205 4 0 Cell and Molecular Biology 4 0 0 Organismal Biology 4 0	Single Variable Calculus I and II – Late Transcendentals (min. 8 units)		8	4				
Sequence (min. 8 units) or MATH 211 and 221	or	MATH 210 and 220	8	4				
MATH 211 and 221 8 4 or	Single Variable Calculus Sequence (min. 8 units)							
221 8 4	or							
MATH 900S			8	4				
Choose 1 PHYS 205 4 or Cell and Molecular Biology or Organismal Biology Choose 1 PHYS 210 4 4 General Chemistry for Science Majors I, with Lab (min. 5 units) or BIOL 190 or BIOL 140 or CHEM 110 3-4 TOTAL MAJOR UNITS CSU GE Requirements Double Counting GE Elective A	or							
Or Cell and Molecular Biology		MATH 900S	8	4				
Or Cell and Molecular Biology	Choose 1	1						
or Organismal Biology 4	or							
or Organismal Biology 4			4					
Organismal Biology 4 Choose 1 PHYS 210 4 4 General Chemistry for Science Majors I, with Lab (min. 5 units) 0r 3-4 3-4 BIOL 190 3-4								
Choose 1			4					
PHYS 210 4 4 4								
General Chemistry for Science Majors I, with Lab (min. 5 units) or	Cheese 1	PHVS 210	4	4				
or BIOL 190 or BIOL 140 or CHEM 110 TOTAL MAJOR UNITS CSU GE Requirements Double Counting GE Elective O BIOL 140 3-4 3-4 3-4 TOTAL MAJOR UNITS 28 CSU GE Requirements 39 Double Counting GE T-8 Elective	General Chemistry for Science Majors I, with Lab (min. 5 units)		т					
BIOL 190 3-4		or						
or BIOL 140 3-4 or CHEM 110 3-4 TOTAL MAJOR UNITS 28 CSU GE Requirements Double Counting GE 7-8 Elective				3-4				
BIOL 140 3-4				-				
or CHEM 110 3-4 TOTAL MAJOR UNITS 28		1		3-4				
CHEM 110 3-4 TOTAL MAJOR UNITS 28 CSU GE Requirements 39 Double Counting GE 7-8 Elective 0								
TOTAL MAJOR UNITS CSU GE Requirements Double Counting GE Elective 28 39 7-8 Elective 0				3-4				
CSU GE Requirements 39 Double Counting GE 7-8 Elective 0	TOTAL MAJOR UNITS		28	J .				
Double Counting GE 7-8 Elective 0								
Elective 0	•							
IULAI UIILS	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 **Upper Division GE/Overlay** Courses Overlay Units 0 GE-UD-Area 5 **BAN 320** Sustainability 3 GE-UD-Area 3 GE-UD-Area 4 3 **Total Units** 6 **University Writing** Requirement Course **GE/Overlay** Units UWR MKTG 305W 0 **Total Units** 0 **Upper Division** Coursework **GE/Overlay** Units Course **BAN 310** Data Analysis with Python I 3 3 BAN 315 Data Analysis with Python II 3 **BAN 320** Optimization and Simulation GE-UD-Area 5; Sustainability 3 BAN 331 Database Management and SQL 3 BAN 340 Machine Learning for Business Applications 3 **BAN 350** Data Wrangling and Data Pipeline Business Data Visualization and Reporting (crosslist: **BAN 441** ITM 441) 3 Social Justice 3 BAN 449 Big Data and Business Applications **BAN 499** Capstone Seminar 3 3 MKTG 305W **Business Communication Total Units** 30 Information System and Supply Chain Analytics Concentration Required Students must complete two (2) courses of the following for 6 units: 3 ITM 336 Information Systems Development and Management **MGMT 364** 3 Global Supply Chain Management **Total Units** 6 Information System and Supply Chain Analytics Concentration Courses Choose four (4) courses of the following for 12 units: ITM 338 Cloud Computing and E-Commerce 3

3

3

ITM 442

ITM 446

Blockchain and Smart Contract

Information Security

MGMT 365	Enterprise Planning and Control		3
MGMT 450	Project Management		3
MGMT 455	Al Enabled Supply Chain Data Analytics		3
MGMT 460	Healthcare Analytics		3
MGMT 465	Supply Chain Forecasting with Machine Learning		3
		Total Units	12
ADDITIONAL COURSE(S)	to MEET 60 UNITS	GE/Overlay	Units
These courses may be ac	ditional major courses or prerequisites taken at th	e Community College.	
Free Elective Elective			6
		Total Units	6
		Grand Total:	60

		FIRST SEMESTER (FALL)	
Free Elective			3
UD Major	BAN 310	Data Analysis with Python I	3
UD Major	MGMT 364	Global Supply Chain Management	3
UD			
Major/UWR	MKTG 305W	Business Communication	3
UD-Area			
4/Overlay			3
		Total:	15
		SECOND SEMESTER (SPRING)	
UD Major	BAN 315	Data Analysis with Python II	3
UD-Area			
5/S/UD Major	BAN 320	Optimization and Simulation	3
UD Major	BAN 331	Database Management and SQL	3
UD Major	BAN 350	Data Wrangling and Data Pipeline	3
UD Major		Concentration Elective	3
		Total :	15
		THIRD SEMESTER (FALL)	
UD Major	ITM 336	Information Systems Development and Management	3
UD Major/SJ	BAN 441	Business Data Visualization and Reporting	3
UD Major	BAN 449	Big Data Technology and Business Applications	3
UD Major	BAN 340	Machine Learning for Business Applications	3
UD-Area 3			3
		Total:	15
		FOURTH SEMESTER (SPRING)	
Free Elective			3
UD Major	BAN 499	Capstone Seminar	3
UD Major		Concentration Elective	3
UD Major		Concentration Elective	3
UD Major		Concentration Elective	3
		Total:	15
		Grand Total:	60