B.S. COMPUTER SCIENCE

Fall 2021 – Spring 2022

CS REQUIREMENTS: A grade of "C" or better is required in the CS Core and the Math Core				80 credits

CS Core (all courses required):		Math/Science Elective (choose 1)*:	
CSCI 2101 Programming & Problem Solving I	(4)	MATH 2217 Calculus III	(5)
CSCI 2102 Programming & Problem Solving II	(4)	MATH 3323 Linear Algebra	(4)
CSCI 3103 Data Structures & Algorithms I	(4)	BIOL 1400/1405 Biodiversity & Evolution (w/ lab)	(5)
CIST 3230 Computer Networking Principles	(4)	CHEM 2120/2125 Chemistry II (w/ lab)	(5)
CSCI 3250 Computer Organization	(4)	PHYS 2230/2235 Physics II (w/ lab)	(6)
CSCI 4104 Data Structures & Algorithms II	(4)	**CS Electives (choose 4):**	
CSCI 4485 Software & Security Engineering	(4)	CIST 3222 Database Systems	(4)
CSCI 4600 Senior Seminar	(2)	CIST 3381 Information Assurance & Security	(4)
Math Core (all courses required):		CSCI 4105 Knowledge Discovery & Data Mining	(4)
MATH 2215 Calculus I	(5)	CSCI 4135 Web Application Engineering	(4)
MATH 2216 Calculus II	(5)	CSCI 4251 Operating Systems	(4)
MATH 2225 Discrete Mathematics I	(4)	CSCI 4463 Artificial Intelligence	(4)
CSCI 2226 Foundations of Computer Sci	(4)	CSCI 4464 Computer Vision	(4)
CSCI 3327 Probability & Applied Statistics	(4)	CSCI 4465 Machine Learning	(4)
Science Core (choose 1):		CSCI 4469 Computer Architecture	(4)
BIOL 1200/1205 Cells and Molecules (w/ lab)	(5)	CSCI 4481 Cryptography and Data Security	(4)
CHEM 2110/2115 Chemisty I (w/ lab)	(5)	CSCI 4510 Topics in Computer Science	(4)
PHYS 2220/225 Physics I (w/ lab)	(6)	CSCI 4800 Independent Study***	(0-4)
		Cognates (0-3+ credits as needed):	
		CSCI 4800 Independent Study / CSCI 4900 Internship	(0-4)
		Other cognates**	as needed

*Students may also use a 2nd course from the Science Core here

**Any Stockton CSCI may be used as a cognate. (CSCI 1100 may not be taken by any CSCI major who has credit for a CSCI course at the 2000 level or above.) Any other course used for a cognate requires preceptor approval.

***To use CSCI 4800 as a CS elective, student must submit a proposal to the CSCI faculty mapping topic to CS learning goals.

++MATH 1100 and any CIST courses other than those listed above, if taken, count only as At Some Distance.

GENERAL STUDIES REQUIREMENTS:				48 credits

G COURSES: (32 total credits) No more than 12 credits in any "G" category may be applied towards the BS degree.			
GEN General Interdisciplinary	(4)	GNM General Natural Science & Math	(4)
GIS-General Integration & Synthesis (Jr. yr.)	(4)	GNM General Natural Science & Math	(4)
GAH General Arts & Humanities	(4)	GSS General Social Science	(4)
GAH General Arts & Humanities	(4)	GSS General Social Science	(4)

AT SOME DISTANCE Electives: (16 total credits) Courses unrelated to your major

	(4)		(4)
	(4)		(4)

GENERAL STUDIES OUTCOME REQUIREMENTS: These course attributes should be completed within the 128 credits needed to graduate.

(A) Arts		(V) Values/Ethics	
(H) Historical Consciousness		(I) International/Multicultural	

GENERAL STUDIES WRITING REQUIREMENT: (4 courses)

Two W1 courses may be in transfer. W2 courses must be taken at Stockton.

W1		W1/W2		W1/W2		W1/W2 at 3000 Level	

GENERAL STUDIES QUANTITATIVE REASONING REQUIREMENT: (3 courses)

Two Q1 courses may be in transfer. Q2 courses must be taken at Stockton.

Q1		Q2		Q1 or Q2		

Prerequisites must be met, check course description on the web.

B.S. in Computer Science: Pre-req Diagram

Readiness for PreCalc by Test Score or Intermediate Algebra course

Readiness for Calculus by Test Score or by MATH 1100 PreCalculus

CSCI 2101 Programming & Problem Solving I

CSCI 2102 Programming & Problem Solving II

CSCI 4600 Senior Seminar [Pre-reqs: CSCI 3250, CSCI 3103, CSCI 2226, MATH 2216, and Junior/Senior status]

CSCI 3250 Computer Organization

CSCI 4469 Computer Architecture

CIST 3381 Info. Assurance & Security

CIST 3230 Computer Networking Principles

CIST 3222 Database Systems

CSCI 4135 Web Application Engineering

MATH 2225 Discrete Mathematics [Pre-req: CSCI 2101 or MATH1100 or MATH2215]

CSCI 3103 Data Structures & Algorithms I

CSCI 4485 Software Engineering

CSCI 4481 Cryptography & Data Security

CSCI 4251 Operating Systems

CSCI 3327 Probability & Applied Statistics

CSCI 2226 Foundations of Computer Science

CSCI 4104 Data Structures & Algorithms II

CSCI 4463 Artificial Intelligence

MATH 2216 Calculus II

MATH 2215 Calculus I

CSCI 4105 Knowledge Discovery & Data Mining

CSCI 4464 Computer Vision

CSCI 4510 Topics in CS [Pre-reqs vary based on topic]

CSCI 4465 Machine Learning

Legend

REQUIRED COURSES

CS ELECTIVES Pick 4 of these

General Studies or At-Some-Distance if necessary

PICK 1 SCIENCE WITH LAB:
BIOL 1200 & 1205
or
CHEM 2110 & 2115
or
PHYS 2220 & 2225

PICK 1 OF THESE:
BIOL 1400 & 1405
or
CHEM 2120 & 2125
or
PHYS 2230 & 2235
or
MATH 2217 or MATH 3323