

# COMPUTER SCIENCE - GENERAL EMPHASIS REQUIREMENTS (BA/BS)

Code	Title	Units
<b>Major Requirements <sup>1</sup></b>		
Software Development Fundamentals:		
COMPSCI 172	INTRODUCTION TO JAVA	3
or COMPSCI 174	INTRODUCTION TO C++	
COMPSCI 220	INTERMEDIATE JAVA	3
or COMPSCI 222	INTERMEDIATE C++	
COMPSCI 223	DATA STRUCTURES	3
Core Courses:		
COMPSCI 271	COMPUTER ORGANIZATION AND ASSEMBLY PROGRAMMING	3
COMPSCI 366	DATABASE MANAGEMENT SYSTEMS	3
COMPSCI 412	EMBEDDED SYSTEMS	3
COMPSCI 433	THEORY OF ALGORITHMS	3
COMPSCI 476	SOFTWARE ENGINEERING	3
Electives: <sup>2</sup>		12
Any COMPSCI courses numbered 300 or above (no limit)		
Up to 6 total units in this category may come from the following courses:		
MATH 355	MATRICES AND LINEAR ALGEBRA	
MATH 450	GRAPH THEORY	
MATH 471	NUMERICAL ANALYSIS	
STAT 342	APPLIED STATISTICS	
<b>Total Units</b>		<b>36</b>

<sup>1</sup> An approved minor is required for this major.

<sup>2</sup> Students pursuing a BSE degree with a second major in Computer Science may also select SECNDED 442 as a technical elective, with Computer Science department consent. Students seeking licensure to teach computer science are required to take this course.

Code	Title	Units
<b>Unique Requirements</b>		
MATH 250	APPLIED CALCULUS SURVEY FOR BUSINESS AND SOCIAL SCIENCES	5
or MATH 253	CALCULUS AND ANALYTIC GEOMETRY I	
COMPSCI 215	DISCRETE STRUCTURES	3
or MATH 280	DISCRETE MATHEMATICS	
ENGLISH 370	ADVANCED COMPOSITION	3
or PWP 371	WRITING IN THE SCIENCES	
or PWP 372	TECHNICAL AND PROFESSIONAL WRITING	