

COMPUTER SCIENCE - COMPREHENSIVE EMPHASIS REQUIREMENTS (BS)

Code	Title	Units
Major Requirements		
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 320	CONCEPTS OF PROGRAMMING LANGUAGES	3
COMPSCI 366	DATABASE MANAGEMENT SYSTEMS	3
COMPSCI 412	EMBEDDED SYSTEMS	3
COMPSCI 424	OPERATING SYSTEMS	3
COMPSCI 433	THEORY OF ALGORITHMS	3
COMPSCI 434	THEORY OF COMPUTATION	3
COMPSCI 476	SOFTWARE ENGINEERING	3
Ethics and Technology:		
LIBST 350	TECHNOLOGY AND SOCIAL RESPONSIBILITY	3
or PHILSPHY 245	CONTEMPORARY MORAL ISSUES	
or PHILSPHY 246		
Writing Requirement:		
ENGLISH 370	ADVANCED COMPOSITION	3
or PWP 371	WRITING IN THE SCIENCES	
or PWP 372	TECHNICAL AND PROFESSIONAL WRITING	
Electives:		12
Any COMPSCI courses numbered 300 or above		
MATH 450	GRAPH THEORY	
MATH 471	NUMERICAL ANALYSIS	
Total Units		51

Code	Title	Units
Unique Requirement: ¹		
MATH 253	CALCULUS AND ANALYTIC GEOMETRY I	5
MATH 280	DISCRETE MATHEMATICS	3
or COMPSCI 215	DISCRETE STRUCTURES	
MATH 355	MATRICES AND LINEAR ALGEBRA	3
STAT 342	APPLIED STATISTICS	3

Code	Title	Units
Unique Requirement: ²		
BIOLOGY 141	INTRODUCTORY BIOLOGY I	
BIOLOGY 142	INTRODUCTORY BIOLOGY II	
CHEM 102	GENERAL CHEMISTRY I	

CHEM 104	GENERAL CHEMISTRY II
GEOGRPY 210	PHYSICAL GEOGRAPHY
GEOLOGY 100	PRINCIPLES OF GEOLOGY
or GEOLOGY 101	ELEMENTS OF GEOLOGY
PHYSICS 180	PHYSICS FOR SCIENTISTS AND ENGINEERS I
or PHYSICS 140	PRINCIPLES OF PHYSICS I
PHYSICS 181	PHYSICS FOR SCIENTISTS AND ENGINEERS II
or PHYSICS 141	PRINCIPLES OF PHYSICS II

¹ An approved minor is not required for this major. However, students in this major may be able to add a minor in Mathematics or in Statistics by completing 8 to 13 additional units of mathematics courses. Consult your advisor or the Department of Mathematics for more information.

² Select two courses from this list. These courses can also satisfy the B.S. degree lab science requirement. If you select two courses from the same subject area, then you will need to complete an additional lab science course from a different subject area to satisfy the B.S. degree requirement. The additional course does not need to be on this list. Lab science courses that are not included in a science major cannot be used to satisfy this requirement. Some lab science courses that DO NOT satisfy this unique requirement include: ASTRONOMY 112, BIOLOGY 120, CHEM 100, GEOGRPY 120, and PHYSICS 130.