

Major Requirements - B.S. in Computer Science	Done	Need
(for students who entered Roanoke College Fall 2010 or later)		
Suggested Freshman Courses:		
EITHER		
MATH 118* DIFFERENTIAL CALCULUS and MATH 119* INTEGRAL CALCULUS		
OR		
MATH 121* CALCULUS I		
MATH 122 CALCULUS II *		
CPSC 120 FUNDAMENTALS OF COMPUTER SCIENCE I (*)		
CPSC 170 FUNDAMENTALS OF COMPUTER SCIENCE II		
MATH 131 DISCRETE MATHMATICS		
Suggested Sophomore Year Courses:		
CPSC 250 DATA STRUCTURES & ALGORITHMS		
CPSC 290 COMPUTER ARCHITECHTURE & OPERATNG SYSTEMS		
MATH 201 LINEAR ALGEBRA		
STAT 202 PROBABILITY		
Suggested Junior/Senior Year Courses:		
CPSC 390 ** THEORY OF COMPUTATION		
CPSC 395 *** ANALYSIS OF ALGORITHMS		
CPSC 425 ** PRINCIPLES OF PROGRAMMING LANGUAGES		
ELECTIVE ****		
ELECTIVE ****		
Senior Year Course:		
CPSC 436 or 435 & 437 SENIOR RESEARCH		
Elective Choices:		
CPSC 301/302 SYSTEMS ADMINISTRATION 1 AND 2 (Offered every year)		
CPSC 310 TOPICS IN APPLIED COMPUTING		
CPSC 340 ** DATABASE SYSTEMS		
CPSC 342 NUMERICAL ANALYSIS		
CPSC 350 HUMAN COMPUTER INTERACTION		
CPSC 360 NETWORKS		
CPSC 365 *** SOFTWARE ENGINEERING & PROJECT DESIGN		
CPSC 405 INDEPENDENT STUDY AND RESEARCH (1/2 unit)		
CPSC 406 INDEPENDENT STUDY AND RESEARCH (1 unit)		

CPSC 407 INDEPENDENT STUDY AND RESEARCH (1/2 unit)		
CPSC 415 *** WEB PROGRAMMING		
CPSC 416 INTERNSHIP		
<p>* CPSC 120, MATH 118 and 119, or 121, and MATH 122 are not explicitly required for the major but are prerequisites for all required courses in the major. Students should consult a computer science faculty member about the need to take these courses.</p> <p>** Taught in 2011/2012 and alternate years: take either junior or senior year depending upon when offered.</p> <p>*** Taught in 2012/2013 and alternate years: take either junior or senior year depending upon when offered.</p> <p>**** Two elective units are required. One of these units may be Math 361 or Math 371. Elective courses are taught on a rotation basis, not every year.</p>		