Department of Computer Science & Engineering
UNIVERSITY OF COLORADO DENVER

Bachelor of Arts in Computer Science, Plus Math dual major

Courses needed for BACS		
Core General Education (24 credit hours)	**Credits**	**Notes**
ENGL 1020 Core Composition I	3	
ENGL 2030 Core Composition II	3	
Social Science	3	
Behavioral Science	3	
Humanities	3	
Arts	3	
Cultural Diversity	3	
International Perspectives	3	
Math (Calc 1 & MATH 2000+)		
MATH 1401 Calculus I	4	Counts for Math reqmnt
MATH 2411 Calculus II	4	Counts for Math reqmnt
Science (8 credit hours) **A sequence of 2 Natural or Physical Sciences with lab**	8	
CS Core (22 credit hours)		
CSCI 1410 Fundamentals of Computing	3	Counts for Math reqmnt
CSCI 1411 Fundamentals of Computing Lab	1	Counts for Math reqmnt
CSCI 2312 Object-Oriented Programming	3	
CSCI 2421 Data Structures & Programming Design	3	
CSCI 2511 Discrete Structures	3	
CSCI 3287 Database Systems	3	
CSCI 3412 Algorithms	3	
CSCI 3508 Introduction to Software Engineering	3	
CS Technical Electives (21 credit hours)		
CS Elective	3	
CS Elective	3	
CS Elective	3	**The following cross listed courses satisfy CS electives and Math electives**
CS Elective	3	CSCI/MATH 4110 Applied Number Theory
CS Elective	3	CSCI/MATH 4408 Applied Graph Theory
CS Elective	3	CSCI/MATH 4650 Numerical Analysis I
CS Elective	3	CSCI/MATH 4660 Numerical Analysis II
Free Electives (38 credit hours) Students Area of Concentration		Fulfilled by "Plus Math" dual major component below
Courses needed for "Plus Math" dual major component		
Math Core (19 credit hours)		
MATH 2421 Calculus III	4	Counts for free electives
MATH 3000 Introduction to Abstract Mathematics	3	Counts for free electives
MATH 3191 Applied Linear Algebra	3	Counts for free electives
MATH 3382 Statistical Theory	3	Counts for free electives
MATH 4310 Introduction to Real Analysis I	3	Counts for free electives
MATH 4779: Math Clinic (Capstone)	3	Counts for free electives
College of Liberal Arts and Sciences Requirements (22 credit hours)		
CLAS Communicative Skills	3	Counts for free electives
CLAS Foreign Language	10	Counts for free electives
CLAS Humanities	3	Counts for free electives
CLAS Behavioral Sciences	3	Counts for free electives
CLAS Social Sciences	3	Counts for free electives
Math Electives (15 credit hours)		
Math Elective	3	**The following cross listed courses satisfy CS electives and Math electives**
Math Elective	3	CSCI/MATH 4110 Applied Number Theory
Math Elective	3	CSCI/MATH 4408 Applied Graph Theory
Math Elective	3	CSCI/MATH 4650 Numerical Analysis I
Math Elective	3	CSCI/MATH 4660 Numerical Analysis II
Total Credits for BACS Plus Math dual major	**139**	
Minimum Credits to Dual BA in CS and BS in Math Degree	**127**	

Note: This checklist was created based on 2019-20 catalog year requirements. See your advisor to create your CS+ plan of study.

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