



CCA to CU-Boulder Transfer Advising Guide for Applied Mathematics (B.S.)

[Applied Mathematics Department Website](#)

Program Overview:

The principal focus of a major in Applied Mathematics is to use of computational methods and implementation of algorithms on computers, alongside strengthening mathematical, computational, and communication skills. Required technical electives may be chosen from mathematics, statistics, engineering, physics, chemistry, computer science, biology, astrophysics, geology, economics, finance and accounting.

Admission Requirements:

[Please see this website for more information regarding CU Engineering admission criteria](#)

CCA Course Summary: (the following courses will apply directly to the degree)

**BOLD denotes admission requirement courses*

Mathematics:

MAT 201*	Calculus 1	(5 credits)
MAT 202*	Calculus 2	(5 credits)
MAT 204	Calculus 3 w/Engineering Applications	(5 credits)
MAT 266	Differential Equations/Linear Algebra	(4 credits)

Science:

PHY 211*	Calc-based Physics 1	(5 credits)
PHY 212	Calc-based Physics 2	(5 credits)
CHE 111	General Chemistry 1	(5 credits)

^CHE 111 will also count for admission requirement in place of PHY 211

Engineering/Computer Science:

CSC 160	Computer Science 1	(4 credits)
CAD 101+102 (OR 227)	Computer Aided Drafting	(6 credits total)
CAD 227 (OR 101+202)	Advanced Revit Architecture	(Civil or Arch Option)
CAD 225	Solid Works	(Mechanical option)
EGG 106	Robotics	(1 credit)
EGG 151	Experimental Design	(2 credits)

Humanities and Social Sciences (H/SS):

- Up to twelve (12) credit hours at the lower division (100-200) level
 - Six (6) credit hours the upper-division level – *typically taken at CU Boulder*
- Please consult our [CCCS humanities and social science list](#) when selecting these classes

Suggested Five-Year Course Plan for Applied Mathematics

This is a suggested guide of coursework only and is subject to change. Always consult with your academic advisor for graduation planning purposes.

*denotes courses that do not apply directly to degree, other than for free electives

Community College of Aurora (first two years)

Fall Semester 1

Course	Course Title	Credits
MAT 121	College Algebra*	4
CHE 101	Intro to Chemistry (with Lab)*	5
ENG 121	English Composition*	3
	Intro to Engineering Workshop*	0
	Total Credits	12

Spring Semester 1

Course	Course Title	Credits
MAT 166	Pre-Calculus*	5
ENG 122	English Composition 2 (H/SS)	3
CSC 119	Intro to Programming*	3
EGG 106	Robotics	1
	Total Credits	12

Fall Semester 2

Course	Course Title	Credits
MAT 201	Calculus 1	5
CHE 111	Chemistry 1 (with lab)	5
CSC 160	Computer Science 1	4
EGG 132*	Data Analysis	1
	Total Credits	15

Spring Semester 2

Course	Course Title	Credits
MAT 202	Calculus 2	5
PHY 211	Physics 1	5
CAD	101+102, or 255, or 227)	--
EGG 151	Experimental Design	2
	Total Credits	12+

CU-Boulder (last three years)

Fall Semester 3

Course	Course Title	Credits
APPM 2350	Calculus 3	4
PHYS 1120	Physics 2	4
PHYS 1140	Experimental Physics	1
	Technical Elective	3
	Humanities/Social Science	3
	Total Credits	15

Spring Semester 3

Course	Course Title	Credits
APPM 2360	Differential Eq./Lin. Algebra	4
APPM 3310	Matrix Methods	3
	Technical Elective (x2)	6
	Engineering Writing Course	3
	Total Credits	16

CU-Boulder (last three years)...continued

Fall Semester 4

Course	Course Title	Credits
APPM 4350	Methods in Applied Math 1	3
APPM 4440	Applied Analysis 1	3
	Technical Elective	3
	Humanities/Social Science	3
	Total Credits	12

Spring Semester 4

Course	Course Title	Credits
APPM 4360	Methods in Applied Math 2	3
APPM 4xxx	Upper-division APPM	3
	Technical Electives (x2)	6
	UD Humanities/Social Science	
	Total Credits	16

Fall Semester 5

Course	Course Title	Credits
APPM 4350	Methods in Applied Math 1	3
APPM 4440	Applied Analysis 1	3
	Technical Elective	3
	Humanities/Social Science	3
	Total Credits	12

Spring Semester 5

Course	Course Title	Credits
APPM 4360	Methods in Applied Math 2	3
APPM 4xxx	Upper-division APPM	3
	Technical Electives (x2)	6
	UD Humanities/Social Science	
	Total Credits	16