FRCC (all campuses) 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

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

*__BOLD denotes admission requirement courses__

Mathematics:

MAT 2410*	**Calculus 1**	**(5 credits)**
MAT 2420*	**Calculus 2**	**(5 credits)**
MAT 2431	Calculus 3 with Engineering Applications	(5 credits)
MAT 2562	Differential Equations/Linear Algebra	(4 credits)

Science:

PHY 2111*	**Calc-based Physics 1**	**(5 credits)**
PHY 2112	Calc-based Physics 2	(5 credits)
CHE 1111	General Chemistry 1	(5 credits)

^CHE 1111 will also count for admission requirement in place of PHY 211

Engineering/Computer Science:

EGG 1000	Introduction to Engineering	(1 credit – free elective)
EGG 1060 ***(preferred)***	Introduction to Engineering Computing	(4 credits)
OR CSC 1060	Computer Science 1 (C++ section)	(4 credits)
CAD 1101+1102	Computer Aided Drafting (preferred for Architectural)	
CAD 2220	Revit Architecture (preferred for Civil)	
CAD 2455+MAC 1042	Solid Works and Machining Lab (preferred for Mechanical)	
EGG 1040	Engineering Projects	(3 credits)
EGG 2011	Statics	(Civ/Mech/Arch/Env options)
EGG 2012	Dynamics	(Civil/Mechanical Option)

Humanities and Social Sciences (H/SS):

- Up to Nine (9) credit hours at the lower division (1000-2000) 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

Front Range Community College (two years)

Fall Semester 1

Course	Course Title	Credits
MAT 1440	Pre-Calculus*	5
CHE 1001	Intro to Chemistry (with Lab)*	5
ENG 1021	English Composition (H/SS)	3
EGG 1000	Intro to Engineering*	1
	Total Credits	**14**

Spring Semester 1

Course	Course Title	Credits
MAT 2410	Calculus 1	5
CHE 1111	Chemistry 1 (with lab)	5
	CAD option	3-6
	Free Elective	3
	Total Credits	**16-19**

Fall Semester 2

Course	Course Title	Credits
MAT 2420	Calculus 2	5
PHY 2111	Physics 1	5
EGG 1060	Engineering Computing	4
	Humanities/Social Science	3
	Total Credits	**17**

Spring Semester 2

Course	Course Title	Credits
MAT 2431	Calculus 3 (Engr. Applications)	5
PHY 2112	Physics 2	5
EGG 1040	Engineering Projects	3
	Humanities/Social Science	3
	Total Credits	**16**

CU-Boulder (last three years)

Fall Semester 3

Course	Course Title	Credits
APPM 2360	Differential Eq./Lin. Algebra	4
APPM 3310	Matrix Methods	3
	Technical Elective	3
	Technical Elective	3
	Total Credits	**13**

Spring Semester 3

Course	Course Title	Credits
APPM 4350	Methods in Applied Math 1	3
APPM 4440	Applied Analysis 1	3
	Technical Elective (x2)	6
	Engineering Writing Course	3
	Total Credits	**15**

CU-Boulder (last three years)…continued

Fall Semester 4

Course	Course Title	Credits
APPM 4360	Methods in Applied Math 2	3
APPM 4xxx	Upper-division APPM	3
	Technical Elective	3
	UD Humanities/Social Science	3
	Total Credits	**12**

Spring Semester 4

Course	Course Title	Credits
APPM 4440	Applied Analysis 1	3
	Technical Elective	3
	Humanities/Social Science	3
	Free elective	3
	Total Credits	**12**

Fall Semester 5

Course	Course Title	Credits
APPM 4350	Methods in Applied Math 1	3
APPM 4xxx	Upper-division APPM	3
	Technical Elective	3
	UD Humanities/Social Science	3
	Total Credits	**12**

Spring Semester 5

Course	Course Title	Credits
APPM 4360	Methods in Applied Math 2	3
	Technical Elective	3
	Technical Elective	3
	Free Elective	3
	Total Credits	**12**