SAMPLE PROGRAM OF STUDY FOR STUDENTS ON PATHWAYS GEN ED
College of Science - Bachelor of Science
Major in Mathematics - Applied Computational Mathematics Option
Total of 120 credit hours needed for graduation

There is considerable flexibility in designing a program of study. The example given below is not likely to fit every situation and is provided for information as you develop your own plan with your advisor.

Fall Semester Freshman			Credits
ENGL	1105	First-Year Writing (**Pathway 1f – Foundational** Discourse)	3
MATH	1225	Calculus of a Single Variable (**Pathway 5f – Foundational** Quantitative and Computational Thinking)	4
MATH	1004	Discovering Mathematics I (F)	1
MATH	1454	Intro to Math Problem-Solving (F)	3
		Pathway 2 Critical Thinking in the Humanities	3
		Pathway 3 Reasoning in Social Sciences	3
			17

Spring Semester Freshman			Credits
ENGL	1106	First-Year Writing (**Pathway 1f – Foundational** Discourse)	3
MATH	1226	Calculus of a Single Variable (**Pathway 5f – Foundational** Quantitative and Computational Thinking)	4
MATH	1044	Discovering Mathematics II (S)	2
		Pathway 2 Critical Thinking in the Humanities	3
		Pathway 6d Critique and Practice in Design	3
			15

Fall Semester Sophomore			Credits
MATH	2114	Introduction to Linear Algebra	3
MATH	2204	Intro Multivariable Calculus	3
		Pathway 3 Reasoning in Social Sciences	3
		Pathway 4 Reasoning in Natural Sciences	3
		Free Elective	3
			15

Spring Semester Sophomore			Credits
MATH	2214	Intro Diff Eqns (**Pathway 5a – Advanced** Quantitative and Computational Thinking)	3
MATH	3034	Introduction to Proofs	3
		Pathway 6a Critique and Practice in the Arts	3
		Pathway 4 Reasoning in Natural Sciences	3
		Pathway 7 Critical Analysis of Identity and Equity in the US	3
			15

Fall Semester Junior			Credits
MATH	3144	Linear Algebra I	3
MATH	3214	Calculus of Several Variables	3
MATH	4445	Intro to Numerical Analysis	3
		Applications Area Course	3
		Pathway 1a – Advanced Discourse	3
			15

Spring Semester Junior			Credits
MATH	3224	Advanced Calculus	3
MATH	4446	Intro to Numerical Analysis	3
		Applications Area Course	3
		Free Elective	3
		Free Elective	3
			15

Fall Semester Senior			Credits
MATH	4425	Fourier Series PDE	3
MATH	4414[1]	Issues in Scientific Computing (F)	3
MATH		MATH Elective Course	3
		Applications Area Course	3
		Free Elective	3
			15

Spring Semester Senior			Credits
MATH	4426[2]	Fourier Series PDE	3
MATH	4454[1]	Applied Mathematical Modeling (S)	3
MATH		MATH Elective Course	3
		Applications Area Course	3
		Free Elective	3
			15

[1] IMPORTANT: Students are required to take only **one of MATH 4414 or MATH 4454**. MATH 4414 is usually taught in the fall while MATH 4454 is usually taught in the spring. A prerequisite for MATH 4414 is CS 2114 or MATH 3054. MATH 1454 is an allowable prerequisite substitution for MATH 4414. Any programming course will suffice as the programming prerequisite for MATH 4454. Consult the Timetable of Classes for other MATH 4414 and MATH 4454 prerequisites.
[2] CMDA 4604 may be taken instead of MATH 4426. Consult the Timetable of Classes for prerequisites.

Refer to approved checksheets for restrictions on Math 4xxx-level course requirements.
(F) = offered fall semesters only
(S) = offered spring semesters only