

**SAMPLE PROGRAM OF STUDY – MATHEMATICS: APPLIED COMPUTATIONAL OPTION**

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 academic advisor. All course requirements for the B.S. Mathematics Applied Computational Option are included in this sample plan. See the 2025-2026 Academic Catalog for details.

Fall Semester Year 1		Credits
<b>MATH 1225</b>	Calculus of a Single Variable (Pathway 5f)	4
<b>MATH 1004</b>	Discovering Mathematics I (fall only) <sup>1</sup>	1
<b>MATH 1454</b>	Intro Math Prog (fall only; coreq: MATH 1225) <sup>2</sup>	3
<b>ENGL 1105</b>	First-Year Writing (Pathway 1f)	3
	Pathway 2	3
	Pathway 3	3
		<b>17</b>

Spring Semester Year 1		Credits
<b>MATH 1226</b>	Calculus of a Single Variable (Pathway 5f)	4
<b>MATH 1044</b>	Discovering Mathematics II (spring only) <sup>1</sup>	2
<b>ENGL 1106</b>	First-Year Writing (Pathway 1f)	3
	Pathway 2	3
	Pathway 7 <sup>3</sup>	3
		<b>15</b>

Fall Semester Year 2		Credits
<b>MATH 2114</b>	Intro to Linear Algebra	3
<b>MATH 2204</b>	Intro to Multivariable Calculus	3
	Pathway 3	3
	Pathway 4 (BIOL, CHEM, GEOS, ISC, NEUR PHYS, or PSYC)	3
	Free Elective	3
		<b>15</b>

Spring Semester Year 2		Credits
<b>MATH 2214</b>	Intro to Differential Equations (Pathway 5a)	3
<b>MATH 3034</b>	Intro to Proofs (prereq: C in MATH 2114)	3
	Pathway 6a	3
	Pathway 4 (BIOL, CHEM, GEOS, ISC, NEUR PHYS, or PSYC)	3
	Pathway 6d	3
<i>Submit Interdisciplinary Application of Mathematics Course Plan (IAMCP)<sup>4</sup></i>		<b>15</b>

Fall Semester Year 3		Credits
<b>MATH 3144</b>	Linear Algebra I	3
<b>MATH 3214</b>	Calculus of Several Variables	3
<b>MATH 4445</b>	Intro to Numerical Analysis	3
	IAMCP Course <sup>4</sup>	3
	Pathway 1a	3
		<b>15</b>

Spring Semester Year 3		Credits
<b>MATH 3224</b>	Advanced Calculus	3
<b>MATH 4446</b>	Intro to Numerical Analysis (spring only)	3
	IAMCP Course <sup>4</sup>	3
	Free Elective	3
	Free Elective	3
		<b>15</b>

Fall Semester Year 4		Credits
<b>MATH 3124</b>	Modern Algebra	3
<b>MATH 4425</b>	Fourier Series PDE (fall only) or CMDA 4604	3
	IAMCP Course <sup>4</sup>	3
	Free Elective	3
	Free Elective	3
		<b>15</b>

Spring Semester Year 4		Credits
<b>MATH 4426</b>	Fourier Series PDE (spring only)	3
or	<b>4414</b> Issues in Scientific Computing <sup>5</sup>	3
or	<b>4454</b> Applied Mathematical Modeling (spring only) <sup>5</sup>	3
	IAMCP Course <sup>4</sup>	3
	Free Elective	3
	Free Elective	3
	Free Elective	1
		<b>13</b>

<sup>1</sup> MATH 1004 and MATH 1044 are strongly recommended free electives for first-year math majors.

<sup>2</sup> MATH 1225 is a corequisite for MATH 1454. Discuss choice of programming course with academic advisor. Other programming course options: CS 1044, CS 1054, CS 1064, CS 1114, BMES 2074, ECE 2514, ME 2004

<sup>3</sup> The course selected in Pathway 7 may double-count with one other Pathway Concept if the selected course is also in another Pathway Concept.

<sup>4</sup> See [Undergraduate Handbook for Mathematics Majors](#) for details.

<sup>5</sup> Check prerequisites for MATH 4414 and MATH 4454 carefully. MATH 4414 is usually taught by math faculty in the fall while MATH 4454 is usually only taught in the spring. Any programming course will suffice as the programming prerequisite for MATH 4454.

**Minimum Graduation Requirements:**

Credit Hours: 120  
Overall GPA: 2.0  
In-Major GPA: 2.0