



2023-2024 Catalog

Applied Mathematics

Bachelor of Science

**Program**

Mathematics

**Total Credits 67**

Mathematics Required Courses

Complete all of the following courses.

Item #	Course Title		Credits
<input type="checkbox"/> MATH 1431	Calculus I	MATH 1431 Prerequisite: MATH 1430 or department consent.	4
<input type="checkbox"/> MATH 1432	Calculus II	MATH 1432 Prerequisite: Grade of 'C' or Better in MATH 1431	4
<input type="checkbox"/> MATH 2431	Calculus III	MATH 2431 Prerequisite: MATH 1432 with a grade of "C" or better	4
<input type="checkbox"/> MATH 2343	Differential Equations I	MATH 2343 Prerequisite: MATH 1432 with a grade of "C" or better	3
<input type="checkbox"/> MATH 3334	Linear Algebra I	MATH 3334 Prerequisite: MATH 1432	3
<input type="checkbox"/> MATH 3360	Discrete Mathematics	MATH 3360 Prerequisite: MATH 1431	3
<input type="checkbox"/> MATH 4331	Real Analysis I	MATH 4331 Prerequisite: MATH 2431	3
<input type="checkbox"/> MATH 4338	Abstract Algebra I	MATH 4338 Prerequisite: MATH 3360	3
<input type="checkbox"/> MATH 4344	Mathematical Modeling	MATH 4344 Prerequisites: MATH 2343 and MATH 3334	3
<input type="checkbox"/> MATH 4370	Capstone Project		3

Mathematics Requirement Option

Complete one of the following courses.

Item #	Course Title		Credits
<input type="checkbox"/> MATH 3335	A First Course in Probability	MATH 3335 Prerequisite: MATH 1432	3
<input type="checkbox"/> MATH 3450	Biostatistics I		4

## Mathematics Electives

Complete two of the following courses.

Item #	Course Title		Credits
<input type="checkbox"/> MATH 3339	Topics in Numerical Analysis	MATH 3339 Prerequisites: MATH 1431, COMSC 1450	3
<input type="checkbox"/> MATH 3343	Differential Equations II	MATH 3343 Prerequisite: MATH 2343	3
<input type="checkbox"/> MATH 4350	Biostatistics II		3
<input type="checkbox"/> MATH 3371	Introduction to Data Analytics	COMSC 3372 Prerequisite MATH 2435, or MATH 3332, or MATH 3450, or PSYC 3433	3
<input type="checkbox"/> MATH 4336	Complex Analysis	MATH 4336 Prerequisite: MATH 2431	3
<input type="checkbox"/> MATH 4343	Introduction to Partial Differential Equations	MATH 4343 Prerequisites: MATH 2343	3
<input type="checkbox"/> MATH 4381	Advance Topics in Applied Statistics		3

## Computer Science

Complete all of the following courses.

Item #	Course Title		Credits
<input type="checkbox"/> COMSC 1450	Introduction to Programming and Computer Science		4
<input type="checkbox"/> COMSC 1451	Object Oriented Programming	COMSC 1451 Prerequisite: COMSC 1450	4
<input type="checkbox"/> COMSC 2351	Data Structures	COMSC 2351 Prerequisite: COMSC 1451	3
<input type="checkbox"/> COMSC 3375	Database Systems	COMSC 3375 Prerequisites: COMSC 1451	3

## Philosophy Logic Requirement

Complete one of the following courses.

Item #	Course Title		Credits
<input type="checkbox"/> PHIL 3333	Logic (Traditional Logic)		3
<input type="checkbox"/> PHIL 3350	Contemporary Logic	PHIL 3350 Prerequisite: PHIL 2314 or 2316/3316	3

## Science Option

Choose **one** group of courses in the same subject area.

Item #	Course Title		Credits
<input type="checkbox"/> CHEM 1341	General Chemistry I	CHEM 1341 Corequisite: CHEM 1141	3

<input type="checkbox"/>	CHEM 1141	General Chemistry I Laboratory	CHEM 1141 Corequisite: CHEM 1341	1
<input type="checkbox"/>	CHEM 1342	General Chemistry II	CHEM 1342 Prerequisite (C or better): CHEM 1341/1141. Corequisite: CHEM 1142	3
<input type="checkbox"/>	CHEM 1142	General Chemistry II Laboratory	CHEM 1142 Corequisite: CHEM 1342	1
<input type="checkbox"/>	BIOL 1351	Introduction to Population Biology and Evolution	BIOL 1351 Corequisite: BIOL 1151	3
<input type="checkbox"/>	BIOL 1151	Introduction to Biology Practicum	BIOL 1151 Corequisite: BIOL 1351	1
<input type="checkbox"/>	BIOL 1352	Introduction to Cell and Molecular Biology	BIOL 1352 Corequisite: BIOL 1152	3
<input type="checkbox"/>	BIOL 1152	Basic Lab Techiques in Biology	BIOL 1152 Corequisite: BIOL 1352	1
<input type="checkbox"/>	PHYS 2333	University Physics I	PHYS 2333 Corequisites: PHYS 2111, MATH 1431	3
<input type="checkbox"/>	PHYS 2111	University Physics I Laboratory	PHYS 2111 Corequisite: PHYS 2333	1
<input type="checkbox"/>	PHYS 2334	University Physics II	PHYS 2334 Prerequisite: PHYS 2333; Pre/Corequisite: MATH 1432.	3
<input type="checkbox"/>	PHYS 2112	University Physics II Lab	PHYS 2112 Corequisite: PHYS 2334	1