

What is Mathematics?

Mathematics can be defined as “the study of the measurement, properties, and relationships of quantities and sets, using numbers and symbols” (American Heritage Dictionary, 2000). It is an essential tool of many diverse fields including natural and life sciences, business, engineering, allied health and professional medicine, the social sciences, and finance to name a few.

What can I do with a Mathematics Degree?

Mathematics majors have a wide variety of careers they can enter. For those interested in teaching, mathematics is taught at all grade levels, from kindergarten through college. A growing field is Applied Mathematics which uses quantitative reasoning and mathematical analysis to collect data and process it in meaningful ways, especially useful in the business and scientific worlds. Also related to math is Actuarial Science, which involves using statistics and probability to determine, analyze, and solve financial problems (for more information see WOIS.org → Educational Programs → Mathematics. Also see Related Educational Programs).

Related Majors

Physics	Mathematics Education
Astronomy	Finance/Insurance
Engineering	Actuarial Science
Computer Science	Accounting
Information Science	Economics
Applied/Computational Mathematics	Statistics

Where can I study Mathematics ?

Nearly every major university in the state of Washington, including public and private schools, offer bachelors degrees in mathematics. Additionally, many schools offer Elementary and/or Secondary Mathematics Teaching degrees and certifications. Students hoping to further their education will often pursue graduate studies in mathematics, physics, or engineering programs.

How do I get started?

At Bellevue College, we are here to help you get started on your path to studying Mathematics as a major. Your main goals at BC are to both graduate with a transferable associates degree and to complete most or all of your major prerequisites. Accordingly, below are some steps that you can take to help you successfully transfer to your dream school as a Mathematics major.

Step One: Research

Making an informed decision about a major requires active research. Here are steps that students should complete while determining whether a Mathematics major is the best fit for their goals:

- Make a list of things you want out of your education. What goals do you have when it comes to what you study in college?
- Log on to WOIS.org to check out potential occupations and what life after college may look like for you. Specifically look at what type of background is necessary for your dream job and if/how your education in mathematics helps you meet those goals. If you have more questions be sure to visit the BC Center for Career Connections on the second floor of the B building. You can also visit O*NET (onetonline.org) which will give you information about your profession on a national level.
- Read the Mathematics department websites of your top transfer schools. Take notes of what you like and dislike about each school, paying special attention to the types of research, educational opportunities, and courses/emphases offered.
- Every university and major concentration **may require different prerequisite courses** to be completed prior to enrolling in their Mathematics program. Contact a departmental representative at your potential transfer university.

Step Two: Pick a BC Degree

As a transfer student, you not only have the responsibility of researching the prerequisite courses required for your major and university, but you also need to pick a degree to pursue at BC. We offer several transfer degrees at BC, but one in particular is especially well-suited for prospective Mathematics students. *Note that some math courses will be counted as Electives.*

BC Degree	Key aspects of this degree:	This degree is ideal for:
Associate in Arts and Sciences (AAS-DTA)	<ul style="list-style-type: none"> Highly flexible transfer degree While it has low math requirements, it also has a large Electives distribution that can carry a heavy load of math and math-related courses Useful for exploratory students to take a variety of courses 	New students looking to explore more and learn about the sciences and math. Also good for mathematics majors who need high-level math classes but not entire science sequences. <i>Note: students interested in physics-related programs should complete the Associate in Science Track 2.</i>

Step Three: Make a Plan

The table below has a list of common prerequisite courses for Mathematics, Applied Mathematics, Secondary Mathematics Teaching, and Actuarial Science programs across our state. While some programs have similar prerequisites, it is important to research individual Mathematics programs at your school of choice, as prerequisites will vary based on the school and program.

Mathematics	Applied Mathematics	Secondary Mathematics Teaching – Certification	Actuarial Science/Statistics
Up to Calculus III <ul style="list-style-type: none"> MATH 151, 152, 153/254 (Some schools also prefer MATH 208, MATH 238) 	High-level Calculus; Programming <ul style="list-style-type: none"> MATH 151, 152, MATH 153/254 MATH 208 and MATH 238 (Computational Math may require CS 210, CS 211, Intro to Programming, Statistics, etc) 	High-level Math, General Ed <ul style="list-style-type: none"> MATH 151, 152, 153/254, 208 BIOL 100 OR CHEM 121* EDUC 205* PSYC 100* CMST 220* 	Calculus; recommended courses <ul style="list-style-type: none"> MATH 151, 152, 153/254 MATH 208, Math 238 BA 240 (preferred) or MATH 130 ACCT 201, ACCT 202* ECON 201, ECON 202*

Note that students planning on taking Math 153 Calculus 3 will also need to take Math 254 Calculus IV as both classes are typically needed in order to transfer to universities as Calculus 3.

** Note that these courses are listed as recommended courses to be taken at Bellevue College but are not necessarily prerequisite to entering one of these programs. Please take time to research your school of choice for preferred prerequisite courses.*

Students interested in studying mathematics for a major, no matter which emphasis, should plan on taking math classes up to at least Math 254 Calculus IV before transfer. Students interested in teaching Mathematics at the secondary school or college-level will typically complete a Bachelor's degree in Mathematics and then complete a post-baccalaureate certification program or a graduate degree. While most schools in Washington do offer a Mathematics program, each school has its own set of math emphases. It is helpful to go straight to a school's Mathematics program website to find all the math-related emphases offered.

Now that you've had a chance to review your prerequisites, and have been able to review the degrees offered at BC, a great next step is to meet with an adviser. Mathematics is part of the Science Division (located in L200) and you can make an appointment to meet with the science adviser by visiting there or by calling 425-564-2321. For general advising appointments call: 425-564-2212.

Additionally please note we can help answer clarifying questions via email: scienceadvising@bellevuecollege.edu

This is an unofficial guide only and is designed to prepare students for entry into Mathematics programs in the state of Washington. It is the student's responsibility to research and communicate with all community college and university programs to which he/she intends to apply to establish prerequisites and admission requirements as they vary and are subject to change without notice.

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