Mathematics (BS)

This program is offered by the George Herbert Walker School of Business & Technology/Mathematics and Computer Science Department and is only available at the St. Louis home campus.

Program Description

Mathematics is a powerful tool used in the natural and social sciences for understanding and predicting the world around us. It also has a beauty of logic and structure within itself, as well as being useful for a wide variety of applications. Students interested in the natural and social sciences are encouraged to have a second major or a minor in mathematics. Graduates with a major in mathematics would be employed anywhere there is a need to solve numerical and logical problems.

Learning Outcomes

- Students will demonstrate critical thinking skills in the area of mathematics.
- Students will demonstrate the ability to solve problems related to the program content.
- Students will demonstrate in depth knowledge of calculus.
- Students will demonstrate comprehension with a variety of mathematics, chosen from applied and/or theoretical topics.
- Students will gain basic computer programming skills.

Degree Requirements

For information on the general requirements for a degree, see Baccalaureate Degree Requirements under the Academic Policies and Information section of this catalog.

- 51 required credit hours
- Applicable University Global Citizenship Program hours, with accommodations for the mathematics BS
- Electives

Global Citizenship Program for Mathematics BS

Requirements are modified to allow one course with the MATH prefix to satisfy both a requirement of the major and also the GCP 'Quantitative Literacy' requirement.

Required Courses

At least 30 of the required 51 mathematics credit hours must be taken at Webster University.

- MATH 1610 Calculus I (5 hours)
- MATH 1620 Calculus II (5 hours)
- MATH 2450 Introduction to Abstract Mathematics (3 hours)
- MATH 3000 Calculus III (5 hours)
- MATH 2410 Discrete Mathematics (3 hours)
- MATH 3020 Numerical Analysis (3 hours)
- MATH 3040 Differential Equations (3 hours)
- MATH 3160 Linear Algebra (3 hours)
- MATH 2200 Statistics (3 hours)
- MATH 3220 Data Mining Methods (3 hours)
- MATH 3500 Introduction to Algebraic Structures (3 hours)
- MATH 3530 Modern Geometry (3 hours)
- MATH 3610 Probability (3 hours)

Students without a second major or a minor in computer science, computer science with an emphasis in cybersecurity, or management information systems are required to take the following courses:

- COSC 1550 Computer Programming I (3 hours)
- COSC 1560 Computer Programming II (3 hours)