Department of Mathematics and Computer & Information Science

Mathematics

Bachelor of Science (B.S.) Degree in Mathematics

Total minimum required credits: 120

A. Major Requirements 20 Courses (86 Credits)

1. Mathematics Courses 12 Courses (48 Credits)

MA2310	Calculus and Analytic Geometry I	4
MA2320	Calculus and Analytic Geometry II	4
MA3030	Discrete Mathematics	4
MA3160	Linear Algebra	4
MA3210	Introduction to Probability & Statistics	4
MA3330	Calculus and Analytic Geometry III	4
MA3520	Transition to Advanced Mathematics	4
MA4360	Differential Equations	4
MA5120	Abstract Algebra I	4
MA5320	Advanced Calculus I	4
CS 2510	Computer Programming I	4

or

CS 2521	Intro to Scientific Programming	

2. Mathematics Electives Courses: 3 courses (12 credits)

Take any 4000 or 5000 level mathematics courses or CS3810 Data Structures & Algorithms

B. Mathematics Department Requirements

- A grade of C or higher is needed in all required mathematics courses
- Candidates who desire a Second Major in Mathematics must take: MA4360, CS2510, and one Math elective at 4000 or 5000 level and Transfer students must complete a minimum of 28 credits (7 courses) of the required mathematics courses at or above the 3000 level at Old Westbury

C. Liberal Education Requirements

- Refer to the Liberal Education Curriculum Guidelines

D. General Electives

In consultation with academic advisor, for a total of 120 credits

E. College Wide Requirements

- 120 credits overall (40 credits at Old Westbury, may transfer a maximum of 80 credits)
- 45 Upper Division credits (3000, 4000, or 5000 level courses)
- 60 Liberal Arts credits
- Cumulative Grade Point Average of 2.0

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Updated: January 2023

Prerequisite Guide

COURSES	PREREQUISITE Grade of C or better
MA2310 Calculus and Analytic Geometry I	MA2090
MA2320 Calculus and Analytic Geometry II	MA2310
MA3030 Discrete Mathematics	MA2090 **or** MA2080
MA3160 Linear Algebra	MA2310 **or** MA2300
MA3210 Intro. to Probability & Statistics	MA2310 **or** MA2300
MA3330 Calculus and Analytic Geometry III	MA2320
MA3520 Transition to Advanced Mathematics	MA2320, MA3030
MA4360 Differential Equations	MA2320
MA5120 Abstract Algebra I	MA3160, MA3520, EC II
MA5320 Advanced Calculus I	MA2320, MA3520, EC II
CS2510 Computer Programming I	CS 1020
CS2521 Scientific Programming in Python	MA2090 **or** MA2080
Mathematics Major Electives	
MA4100 Number Theory	MA3030
MA4160 Advanced Linear Algebra	MA3160
MA4200 Probability	MA3330
MA4510 Geometry	MA2320
MA4910 Operations Research I	MA3160
MA5380 Complex Analysis	MA3330
CS2511 Computer Programming II	CS2510
CS3180 Data Structures & Algorithms	CS2511

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