

Appendix J

**Associate of Science in Natural Sciences or Mathematics, Mathematics Option at Bergen
Community College
and
Bachelor of Science in Mathematics at William Paterson University, College of Science and Health**

<u>Bergen Courses AS</u>	<u>Credits</u>	<u>WP Equivalency BS</u>
<u>Semester 1</u>		
MAT 280 Calculus I	4	MATH1600 Calculus I
Natural Science Elective	4	Equivalent Natural Science Credit
Free Elective	3	Degree Credit
ENG101 English Composition I	3	ENG1100 College Writing
<u>Semester 2</u>		
MAT281 Calculus II	4	MATH1610 Calculus II
ENG201 English Composition II	3	ENG1500 Experiences in Literature
Humanities Elective (Recommend World Language I Course)	3	Equivalent World Language I Credit
Natural Science Elective	4	Equivalent Science Elective
<u>Semester 3</u>		
Humanities Elective (Recommend World Language II Course)	3	Equivalent World Language II Credit
Social Science Elective	3	Equivalent Social Science Credit
COM100 Speech Communication OR COM102 Public Speaking	3	COMM1100 Communication in Action OR COMM2630 Public speaking
MAT282 Calculus III	4	MATH2010 Calculus III
MAT286 Linear Algebra	4	MATHH2020 Linear Algebra
<u>Semester 4</u>		
Math or Natural Science Elective	4	Equivalent Math or Science Credit
Free Elective	3	Degree Credit
MAT283 Differential Equations	4	MATH3220 Differential Equations
MAT268 Statistical Methods or MAT285 Discrete Mathematics (Recommended)	4	MATH2300 Statistics I OR MATH2000 Logic and Methods of Higher Mathematics (Recommended)

BS Mathematics (53 to 54 Required Credits for the major)

Semester 5

4 MATH3240 Probability and Statistics

3 MATH3010 Modern Algebra

3 Choose a free elective/minor course

3 Choose a free elective/minor course

3 Choose a free elective/minor course

Semester 6

4 CS2300 Computer Science I

3 Choose a major elective (**list below**)

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3 Choose a free elective/minor course

4 **Choose one:** BIO1620 General Biology,
CHEM1600 General Chemistry I, or PHYS2600
General Physics I

Semester 7

3 MATH4230 Real Analysis

3 Choose a major elective (**list below**)

3 Choose a major elective (**list below**)

3 Choose a free elective/minor course

3 Choose a free elective/minor course

Semester 8

2 MATH4900 Mathematics Research Experience

3 Choose a free elective/minor course

3 Choose a free elective/minor course

3	Choose a free elective/minor course
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3	Choose a free elective/minor course
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Mathematics Elective Requirement (BS)

Four courses Required: 12-13 credits

Select four (4) courses; at least one must be at the 4000-level.

MATH 2200 Python for Exploration

MATH 3110 Number Theory

MATH 3230 Foundations of Geometry

MATH 3260 Mathematical Models in Finance and Interest Theory

MATH 3320 Statistical Computing

MATH 3340 Applied Regression Analysis

MATH 3350 Introduction to Numerical Analysis

MATH 3800 Linear and Nonlinear Optimization

MATH 3990 Selected Topics

MATH 4010 Applied Algebra

MATH 4110 Advanced Discrete Math

MATH 4130 Experimental Design for Statistics

MATH 4150 Topics From Applied Math

MATH 4210 Mathematical Statistics

MATH 4270 Mathematical Models Finance II

MATH 4300 Derivative Markets

MATH 4990 Independent Study

PHYS 2610 General Physics II

Notes:

1. William Paterson University will accept all associate degree credits under this program-to-program articulation agreement, including up to half of the William Paterson University major required credits, from New Jersey community college students who enroll at William Paterson University
2. William Paterson University recommends students take two semesters of one foreign language at the community college. Two semesters of American Sign Language can also fulfill the foreign language requirement.
3. WP Online students should always check with their advisor and/or refer to the semester course schedule when choosing electives, as elective course offerings may vary each semester.