

# MATHEMATICS MAJOR, BA

Campus: NYC, Westchester

A generalized program that enables students to develop a variety of skills. It allows students to double major or select up to two minors.

## Major Completion Summary

Requirement	Credits
University Core Requirements	44-55
Major Requirements	37
Open Electives	28-39
<b>Total Credits</b>	<b>120</b>

## University Core Requirements (44-55 Credits)

See complete University Core (<http://catalog.pace.edu/undergraduate/university-core-curriculum/>) requirements.

Code	Title	Credits
<b>University Core</b>		
Complete University Core Requirements <sup>1</sup>		44-55
<b>Total Credits</b>		<b>44-55</b>

<sup>1</sup> MAT 131 Calculus I (4 credits) may be used to satisfy Math core requirement; otherwise it must be taken for major credit.

## Major Requirements (37 Credits)

Code	Title	Credits
<b>Required Major Courses</b>		
MAT 131	Calculus I <sup>1</sup>	4
MAT 132	Calculus II	4
MAT 137	Introduction to Discrete Mathematics	4
or MAT 233	Mathematical Structures and Models	
MAT 234	Introduction to Probability and Statistical Analysis	4
MAT 236	Multivariable Calculus	4
MAT 238	Linear Algebra	4
MAT 253	Differential Equations	4
MAT 301	Algebraic Structures	3
MAT 315	Introduction to Real and Complex Analysis	4
MAT 400	Mathematics: Connections, Communications, Research (or MAT 490 and MAT 491)	3
<b>Total Credits</b>		<b>38</b>

<sup>1</sup> MAT 131 Calculus I (4 credits) may be used to satisfy Math core requirement; otherwise it must be taken for major credit.

## Open Electives (28-39 Credits)

Code	Title	Credits
<b>Open Electives</b>		
Select 28-39 credits		28-39
<b>Total Credits</b>		<b>28-39</b>

*In addition to the courses listed below, students are required to complete two courses with the Anti-Racism Education attribute and two courses with the Writing Enhanced attribute attached. These courses may be taken during any semester of their education. See advisor for more information.*

Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
ENG 110	Composition	3
UNV 101	First-Year Seminar: Introduction to University Community	1
MAT 131	Calculus I	4
Take any two remaining Area of Knowledge, Learning Community (LC) courses		6
Take any one remaining Area of Knowledge course		3
<b>Credits</b>		<b>17</b>
<b>Spring</b>		
MAT 132	Calculus II	4
ENG 120	Critical Writing	4
MAT 234	Introduction to Probability and Statistical Analysis (Analysis of Human, Social, and Natural Phenomena (AOK5))	4
One Lab science course		3
<b>Credits</b>		<b>15</b>
<b>Second Year</b>		
<b>Fall</b>		
MAT 236	Multivariable Calculus	4
MAT 233 or MAT 137	Mathematical Structures and Models or Introduction to Discrete Mathematics	4
First Second Language Course. See Advisor for guidelines		3
One Civic Engagement (CE) course		3
Take any one remaining Area of Knowledge course		3
<b>Credits</b>		<b>17</b>
<b>Spring</b>		
Second Language Course, if applicable		3
ENG 201	Writing in the Disciplines	3
MAT 253	Differential Equations	4
Take any one remaining Area of Knowledge course		3
Take any one remaining Area of Knowledge course		3
<b>Credits</b>		<b>16</b>
<b>Third Year</b>		
<b>Fall</b>		
CS 121 or CIS 101	Introduction to Computer Science (Preferred) or Introduction to Computing	4
MAT 238	Linear Algebra	4
Take any one remaining Area of Knowledge course		3
Open Elective Course		4
<b>Credits</b>		<b>15</b>
<b>Spring</b>		
MAT 301 or MAT 315	Algebraic Structures or Introduction to Real and Complex Analysis	3-4
COM 200	Public Speaking	3
Open Elective Course		3
Open Elective Course		3
<b>Credits</b>		<b>12-13</b>
<b>Fourth Year</b>		
<b>Fall</b>		
MAT 490 or MAT 400	Mathematics Seminar Capstone Experience I or Mathematics: Connections, Communications, Research	1-3
Open Elective Course		3
Open Elective Course		3

Open Elective Course		3
Open Elective Course		4
<b>Credits</b>		<b>14-16</b>
<b>Spring</b>		
MAT 491	Mathematics Seminar Capstone Experience II (Only if student took MAT 490 and not MAT 400)	2
MAT 301 or MAT 315	Algebraic Structures or Introduction to Real and Complex Analysis	3-4
Open Elective Course		3
Open Elective Course		3
Open Elective Course		3
<b>Credits</b>		<b>14-15</b>
<b>Total Credits</b>		<b>120-124</b>