BS in Financial Mathematics

43
Pathways Credits

9
Pre-Weissman Credits

21
Program Pre-requisite Credits

43
Major Credits

4
Elective Credits

The degree map is a suggested term-by-term sample course schedule. Use the Degree Map along with DegreeWorks as tools to assist you in planning your academic path to graduation. You should customize your Degree Map to fit your individual needs.

Career related information can be found on the last page.

NOTE: A minimum 120 credits is required for the Bachelor of Science in Financial Mathematics (BSFM) degree. A minimum of 90 liberal arts credits is required for the BSFM. FYS 1000 is a requirement for the first term at Baruch College and MUST be completed in order to graduate.
# Degree Map

## BS in Financial Mathematics

### Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 2100 Writing I</td>
<td>3 CR</td>
</tr>
<tr>
<td>MTH 2610 Calculus I</td>
<td>4 CR</td>
</tr>
<tr>
<td>Flexible Core Course</td>
<td>3 CR</td>
</tr>
<tr>
<td>FYS 1000 First Year Seminar</td>
<td>0 CR</td>
</tr>
</tbody>
</table>

**16 FALL CREDITS + 16 SPRING CREDITS = 32 CREDITS**

### Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 3050 Calculus III &amp; Vector Calculus</td>
<td>4 CR</td>
</tr>
<tr>
<td>Foreign Language II</td>
<td>3 CR</td>
</tr>
<tr>
<td>ECO 1001 Microeconomics</td>
<td>3 CR</td>
</tr>
<tr>
<td>Liberal Arts Elective</td>
<td>4 CR</td>
</tr>
<tr>
<td>COM 1010 Speech Communication</td>
<td>3 CR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 1002 Macroeconomics</td>
<td>3 CR</td>
</tr>
<tr>
<td>MTH 4000 Bridge to Higher Mathematics</td>
<td>4 CR</td>
</tr>
<tr>
<td>ACC 2101 Principles of Accounting</td>
<td>3 CR</td>
</tr>
<tr>
<td>MTH 3300 Algorithms, Computers, &amp; Prog. I</td>
<td>3 CR</td>
</tr>
<tr>
<td>MTH 4100 Linear Algebra</td>
<td>3 CR</td>
</tr>
</tbody>
</table>

**32 PRIOR CREDITS + 17 FALL CREDITS + 16 SPRING CREDITS = 65 CREDITS**

*Free Electives can be any business, liberal arts, or public affairs course*
COURSE ABBREVIATION
Class Name CREDITS
REQUIREMENT FULFILLED

FALL

ENG 2800, CMP 2800, ENG 2850
Great Works of Literature I or II
PATHWAYS COLLEGE OPTION REQUIREMENT

Liberal Art Minor Course
PATHWAYS COLLEGE OPTION REQUIREMENT

MTH 4120
Introduction to Probability
MAJOR OR REQUIREMENT

MTH 4300
Algorithms, Computers, and Prog. II
MAJOR OR REQUIREMENT

SPRING

MTH 4115 (offered in Spring only)
Numerical Methods for Differential Equations in Finance
MAJOR OR REQUIREMENT

FIN 3000
Principles of Finance
MAJOR OR REQUIREMENT

MTH 4125
Intro to Stochastic Processes
MAJOR OR REQUIREMENT

Liberal Art Minor Course
PATHWAYS COLLEGE OPTION REQUIREMENT

MTH 4130
Mathematics for Statistics
MAJOR OR REQUIREMENT

65 PRIOR CREDITS + 13 FALL CREDITS + 18 SPRING CREDITS = 96 CREDITS

FALL

FIN 3610
Corporate Finance
MAJOR OR REQUIREMENT

MTH 4500
Introductory Financial Mathematics
MAJOR OR REQUIREMENT

Life and Physical Sciences
Natural Sciences Lab Course
PATHWAYS REQUIREMENT

Scientific World
Natural Sciences Lecture Course
PATHWAYS REQUIREMENT

SPRING

MTH 4600
Data Analysis and Simulation
MAJOR OR REQUIREMENT

MTH 5500
Stochastic Calculus for Finance
MAJOR OR REQUIREMENT

Liberal Art Minor Capstone
PATHWAYS COLLEGE OPTION REQUIREMENT

96 PRIOR CREDITS + 13 FALL CREDITS + 11 SPRING CREDITS = 120 CREDITS

*Free Electives can be any business, liberal arts, or public affairs course
**General Notes**

- Be sure to consult with the Math Department faculty advisor regarding specific major requirements (VC 6-230). Major courses must be approved by the faculty advisor.
- You must complete a liberal arts minor as part of the College Option requirement to graduate.
- Consult with the Undergraduate Bulletin to check course descriptions for prerequisites and restrictions: [https://www.baruch.cuny.edu/bulletin/](https://www.baruch.cuny.edu/bulletin/)

The following subjects are considered liberal arts and can be taken at any level to satisfy liberal arts electives:

<table>
<thead>
<tr>
<th>AAS</th>
<th>ANT</th>
<th>ART</th>
<th>BIO</th>
<th>BLS</th>
<th>CHM</th>
<th>COM</th>
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<tbody>
<tr>
<td>CMP</td>
<td>ECO</td>
<td>ENG</td>
<td>ENV</td>
<td>FLM</td>
<td>FPA</td>
<td>GLS</td>
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<tr>
<td>HED</td>
<td>HIS</td>
<td>HSP</td>
<td>IDC</td>
<td>JRN</td>
<td>LACS</td>
<td>LIB</td>
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<tr>
<td>LTS</td>
<td>MEC</td>
<td>MTH</td>
<td>NMA</td>
<td>PHI</td>
<td>PHY</td>
<td>POL</td>
</tr>
<tr>
<td>PSY</td>
<td>REL</td>
<td>SOC</td>
<td>THE</td>
<td>WSM</td>
<td>ALL MODERN LANGUAGES</td>
<td></td>
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</tbody>
</table>

The following courses are **not** considered liberal arts:

<table>
<thead>
<tr>
<th>ART 5010</th>
<th>ART 5011</th>
<th>COM 4059</th>
<th>ECO 5010</th>
<th>ECO 5011</th>
<th>FPA 5070</th>
<th>FPA 5071</th>
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<tbody>
<tr>
<td>HED 1810</td>
<td>HED 2920</td>
<td>MSC 2061</td>
<td>MSC 2062</td>
<td>MSC 2063</td>
<td>MSC 2064</td>
<td>MSC 5050</td>
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<tr>
<td>MSC 5051</td>
<td>SOC 4085</td>
<td>SOC 4086</td>
<td>ART/MSC/THE Studio Elective Courses</td>
<td></td>
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</tbody>
</table>

**Notes about the Major**

- A combined GPA of 3.5 or higher in MTH 2610 (Calculus I) and MTH 3010 (Calculus II) is required to complete the pre-requisite requirement for the major.
- Students must pass MTH 3010 with a B+ or higher in order to take MTH 3050 (Multi-Variable and Vector Calculus).
- To gain official admission to the program, students must complete MTH 3050 and MTH 4000 (Bridge to Higher Mathematics) with a minimum grade of B in each course.
- Completion of MTH 4120 (Introduction to Probability) satisfies the STA 2000 (Business Statistics) prerequisite for FIN 3000.
- **The BSFM is the only Bachelor of Science (BS) Program offered through the Weissman School of Arts and Sciences and follows the Weissman base curriculum.**

**Career Exploration**

**5 Career Options for Financial Mathematics Majors**

1. Data Analyst
2. Financial Consultant
3. Programmer
4. Research Scientist
5. Public Policy Analyst

**5 Top Skills for Financial Mathematics Majors**

1. Problem Solving
2. Technical/Computational
3. Analysis
4. Communication
5. Result Projection & Forecasting

[Additional Career Information for Financial Mathematics Majors](#)