

# MATHEMATICAL FINANCE MAJOR (B.S.B.)

## Majors in Finance: BFIN, BFIT and BMAF

From individuals to organizations, finance touches all aspects of decision making. The Department of Finance, through its innovative curriculum integrating concepts with practice, delivered by award-winning faculty, uniquely prepares you for all these aspects. The Department's official recognition by the Chartered Financial Analysts Association – recognition that only 10% of finance departments nationwide have attained – and by the Certified Financial Planning Board, the most prestigious of all professional finance designations, is testimony to its distinctiveness.

You may select only one from among three majors: Finance (BFIN), Mathematical Finance (BMAF), and Finance and Technology –“FinTech” (BFIT). Each one is anchored in two fundamental concepts that are integral to sound decision making: time and risk. They are the nerve center for responses to four basic issues: which assets to target; how much to invest; where to obtain funding; and the length of time involved.

In conjunction with the majors, the Department of Finance offers courses in financial planning and wealth management.

## Major in Mathematical Finance

For the mathematically gifted, the major is designed to enhance the comprehension of finance through the power of mathematics. The application of mathematical methods holds great promise for delivering solutions to fundamental financial problems, as found in capital budgeting, risk management, portfolio analysis, and actuarial science. The major draws on tools from applied mathematics, including calculus, linear algebra, and statistics, to prepare students for careers in corporate treasury, investment banking, commercial banking, hedge funds, insurance, and risk management. As the pace of financial innovation quickens, the need for highly qualified individuals with specific training in financial mathematics will only accelerate. The major is designed not only to meet increasing market demands but also to prepare you for advanced study in finance at the graduate level. You can begin the major in the first semester of your freshman year.

## Financial Planning Association (FPA-NJ)

The department promotes student activities through this organization, which is a chapter under the Financial Planning Association. It welcomes students of all majors to participate in its interactive meetings, which are designed to introduce students to career paths in finance through alumni panel discussions, guest presentations, and corporate field trips. The club's collaboration with the Finance Advisory Board, a Seton Hall alumni association, connects students with mentors who work for financial and non-financial firms. The club also offers tutoring for finance courses in the Center for Securities Trading and Business Analytics.

## Hall Street Fund (Investment Club)

The Investment Club is organized as a mock brokerage corporation complete with an investment fund branded as the “Hall Street Fund.” The primary objective of the Hall Street Fund, as managed by the Investment Club, is to provide students with real-life investment banking business experience and encourage students from disciplines other than finance to assume roles of responsibility, including asset allocation, security analysis, portfolio management, operational risks, compliance reporting,

marketing campaigns, public relations, expense budgeting, organizational management, and legal reviews. Because students will be making investment decisions as part of broadening their educational experience, it cannot be presumed that the fund's performance will outperform the market. The money has been generously donated by outside benefactors for the purpose of providing working capital. Involvement in this club is a requirement to enroll in BFIN 1004 Student Portfolio Management I (SMIF)/BFIN 1005 Student Portfolio Mgmt II (Student Managed Investment Fund).

## Finance Honor Society

The Stillman School's Finance Honor Society formally recognizes BFIN, BMAF and BFIT students who consistently achieve academic excellence and who contribute to community development through their active involvement in finance-related campus activities. The criteria for induction are:

1. GPA of at least 3.50
2. GPA of at least 3.50 in all finance courses (prefix BFIN) completed;
3. completion of at least 12 credit hours of BFIN courses with a grade of at least a B; and
4. active involvement in finance-related campus activities, such as the Investment Club, the *Stillman Exchange*, or the CFA Research Challenge.

## Mathematical Finance (BMAF) Major Requirements

Students must earn at least a “C” in each individual BFIN and MATH course and earn a 2.5 average for all major courses. A single major course can be taken at most twice.

Code	Title	Hours
BFIN 3211	Financial Strategy	3
BFIN 4227	Investment Analysis	3
MATH 1501	Calculus I - Math - Phys Sci	4
MATH 1511	Calculus II - Math - Phys Sci	4
MATH 2511	Calculus III - Math - Phys Sci	4
MATH 2810	Linear Algebra - Diff Equation	4
Select at least two of the following:		6
BFIN 4230	Portfolio Analysis	
BFIN 4234	Futures, Options and Other Derivatives	
BFIN 4250	Fixed Income Analysis	
BFIN 4255	Financial Modeling	
BFIN 4262	Corporate Risk Management	
<b>Total Hours</b>		<b>28</b>