

4+1 B.S. IN FINANCIAL MATHEMATICS FROM SETON HALL AND M.S. IN FINANCIAL ANALYTICS FROM STEVENS INSTITUTE OF TECHNOLOGY

Curriculum

B.S. in Financial Mathematics at Seton Hall University

Code	Title	Hours
Freshman Year		
CSAS 1114	Intro to Program Design I	3
MATH 1501	Calculus I - Math - Phys Sci	4
MATH 1511	Calculus II - Math - Phys Sci	4
MATH 1611	Intro to Discrete Mathematics	3
PHIL 1204	Symbolic Logic (recommended)	3
ECON 1402	Principles of Economics I	3
ECON 1403	Principles of Economics II	3
Sophomore Year		
MATH 2511	Calculus III - Math - Phys Sci	4
MATH 2711	Intro Probability - Statistics	4
MATH 2813	Linear Algebra	4
BACC 2103	Financial Accounting	3
BFIN 2201	Business Finance	3
Junior-Senior Year		
MATH 3515	Analysis	4
MATH 3711	Statistical Analysis	3
MATH 6721	Financial Calculus	3
MATH 6722	Adv Topics Financial Calculus	3
Select four of the following five BFIN courses:		12
BFIN 3211	Financial Strategy	
BFIN 4227	Investment Analysis	
BFIN 4234	Futures, Options and Other Derivatives	
BFIN 4250	Fixed Income Analysis	
BFIN 4255	Financial Modeling	
Total Hours		66

Junior-Senior Year courses taken at Seton Hall towards the M.S. in Financial Analytics:

- Take the graduate course DAVA 7000 Data Visualization which will count towards FE550 Data Visualizations Applications in the M.S. in Financial Analytics.
- Take the graduate course MATH 6611 Operations Research that counts towards FE646 Optimization Models and Methods in Finance.
- Take the graduate course MATH 6721 Financial Calculus (required for B.S. in Financial Mathematics) that counts towards FE530 Introduction to Financial Engineering for the M.S. in Financial Analytics.
- Take the graduate course MATH 6722 Adv Topics Financial Calculus (required for B.S. in Financial Mathematics) which counts

towards FE543 Introduction to Stochastic Calculus for Finance for the M.S. in Financial Analytics as well as the B.S. in Financial Mathematics.

If a student chooses to take all 4 courses at Seton Hall, only three will be accepted for elective credits at Stevens. Additionally the students will come with knowledge of R and Python which are required programming languages for the MSFA program. Should the student need a refresher they would be advised on necessary prerequisites. Students must attain a minimum grade of B in any SHU course to transfer to Stevens.

Last Year as Graduate in M.S. in Financial Analytics at Stevens Institute of Technology

Fall semester (12 credits total)

- FE 582 Foundations of Financial Data Science (2 credits)
- FE 513 Financial Lab: Database Design (1 credits)
- FE 541 Applied Statistics with Applications in Finance (3 credits)
- FE 590 Statistical Learning in Finance (3 credits)
- Electives (3 credits). All FE courses count but students can choose from graduate courses in Business Intelligence & Analytics, Finance, Management, Information Systems, Math or Computer Science, with the approval of the Stevens assigned advisor. Examples are:
 - FE 511 Introduction to Bloomberg & Thomson Reuters (1 credit)
 - FE 515 Introduction to R (1 credit)
 - FE 520 Introduction to Python (1 credit)
 - FE 514 Introduction to SAS (1 credit)
 - FE 535 Introduction to Financial Risk Management (3 credits)
 - FE 541 Applied Statistics with Application in Finance (3 credits)
 - FE 550 Data Visualization Application (3 credits)
 - FE 595 Financial Systems Technology (3 credits)
 - FE 635 Financial Enterprise Risk Engineering (3 credits)
 - FE 646 Optimization Models and Methods in Finance
 - FE 655 Systemic Risk and Financial Regulation (3 credits)
 - Courses above the 500 level with prefixes BIA, CS, FE, FIN, MA, MGT, or MIS (advisor approval required)

Spring Semester (9 credits total)

- FE 542 Time Series with Applications to Finance (3 credits)
- FE 595 Financial Technology (FinTech) (3 credits)
- FA 800 Project in Financial Analytics (3 credits)

In the case when the student decides to opt for a Master thesis option the student will replace the elective in Fall with FA 900 3 credits and the FA 800 in the spring with FA 900 for another 3 credits.

The MSFA program requires completion of 30 credits. Other courses may be substituted to those listed pending the Advisor's approval.