

# 4+1 B.S. IN FINANCIAL MATHEMATICS FROM SETON HALL AND M.S. IN FINANCIAL ENGINEERING FROM STEVEN INSTITUTE OF TECHNOLOGY

## Curriculum

### B.S. in Financial Mathematics at Seton Hall University

Code	Title	Hours
<b>Freshman Year</b>		
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
<b>Junior-Senior Year</b>		
MATH 3515	Analysis	4
MATH 3711	Statistical Analysis	3
MATH 6721	Financial Calculus	3
MATH 7722	(MATH 6722)	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	3
BFIN 4250	Fixed Income Analysis	
BFIN 4253	(remove 4253)	
BFIN 4255	Financial Modeling	
<b>Total Hours</b>		<b>51</b>

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

- Take the graduate course DAVA 7000 Data Visualization which will count towards FE550 Data Visualizations Applications in the M.S. in Financial Engineering.
- Students wishing to obtain the M.S. in Financial Analytics take MATH 6611 Operations Research 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 Engineering.
- 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 Engineering as well as the B.S. in Financial Mathematics.

If the student chooses to take all 4 courses at Seton Hall, only three will be accepted for a total of 9 credits at Stevens. 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 Engineering at Stevens Institute of Technology

#### Fall Semester (12 Credits)

- FE 610 Stochastic Calculus for Financial Engineers (3 credits)
- FE 620 Pricing and Hedging (3 credits)
- FE 630 Portfolio Theory and Applications (3 credits)
- FE 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) (1 credit)
- Courses above the 500 level with prefixes BIA, CS, FE, FIN, MA, MGT, or MIS (advisor approval required)

#### Spring Semester (9 Credits)

- FE 621 Computational Methods in Finance (3 credits)
- FE 680 Advanced Derivatives (3 credits)
- FE 800 Project in Financial Engineering (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 FE 900 3 credits and the FE 800 in the spring with FE 900.