LSA MATHEMATICS
UNIVERSITY OF MICHIGAN

Finance & Risk Management

The program in **Mathematics of Finance and Risk Management** (or **Mathematics of Finance** for short) is designed to provide a broad education in the quantitative aspects of risk management and finance. Today's financial instruments require sophisticated mathematical techniques for their valuation. These techniques come from the fields of probability, statistics, and differential equations.

The major program must include at least ten courses: 4 basic courses (**II**), 4 special Financial Mathematics courses (**III**), and two related courses as described below (**IV**).

I. *Prerequisites (5 courses)* *{must be completed with C- or better}*

Instructions	**Course(s)**	**Student Elections** (enter your course selections here)
Select **one** of the following **pairs** of **introductory mathematics courses:**	205 & 217 215 & 217 285 & 217 295 & 296	***1.*** _____ ***2.*** _____
Select **both** of the following **Econ** courses:	Econ 101 & Econ 102	***3.*** _____ ***4.*** _____
EECS 183 or working knowledge of a high level computer language (Fortran, C, or C++)	EECS 183 or working knowledge	***5.*** _____

II. *Basic Courses** (4 courses)* *{must be completed with C- or better}*

Instructions	**Course(s)**	**Student Elections** (enter your course selections here)
Select **one** of the following **Differential Equations** courses:	Math 286 or Math 316	***1.*** _____
Select the following **Probability** course:	Math 525	***2.*** _____
Select the following **Statistics** course:	Stats 426	***3.*** _____
Select **one** of the following **Analysis** courses:	Math 351 or Math 451	***4.*** _____

***More advanced students, such as those who have completed Math 396, may substitute higher-level courses with the approval of a departmental advisor.*

III. Special Financial Math Courses** (4 courses)

Instructions	Course(s)	Student Elections (enter your course selections here)
Select **all** of the following **Financial** courses:	Math 423 Math 472 Math 474 Math 526	***1.*** _____ ***2.*** _____ ***3.*** _____ ***4.*** _____

*** The special **Mathematics of Finance** courses must include Math 423, 472, 474, and 526. Careful planning is essential.*

IV. Advanced Courses** (2 courses)

Instructions	Course(s)			Student Elections (enter your course selections here)
Select **two** of the following **Advanced** courses:	Math 422 Math 462 Econ 401 Econ 409 Fin 302 IOE 310 Datasci 406 Datasci 451 Stats 413 Stats 500 Stats 503 Stats 531	Math 472 Math 623 Econ 402 Econ 452 Fin 317 IOE 452 Datasci 415 Datasci 470 Stats 480 Stats 501 Stats 505	*Finance 408 AND 409 (1.5 credits each) *All accounting courses 300 and above	***1.*** _____ ***2.*** _____

***To complete the major, each student should elect two additional intermediate or advanced courses related to **Financial Mathematics**. Some, but not all, of the courses numbered 300 and above offered by Accounting, Computer Science, Economics, Finance, Industrial and Operations Engineering, and Statistics are appropriate here.*

*Other courses may sometimes be appropriate and in all cases **approval of the advisor in Mathematics of Finance is required.***

Accelerated Master's Degree Program

Currently enrolled University of Michigan undergraduates majoring in Financial Mathematics are eligible to apply to the Accelerated Master's Degree Program (AMDP) in Quantitative Finance and Risk Management.