

# MS in Finance Program Policy Statement

University of Delaware Lerner College of Business and Economics Department of Finance Newark, DE 19716-2712 <u>ms-finance@udel.edu</u>

https://lerner.udel.edu/programs/masters-programs/finance-ms/

# PROGRAM POLICY STATEMENT MASTER OF SCIENCE, FINANCEUNIVERSITY OF DELAWARE

Approved by the University Faculty Senate Graduate Studies Committee March 7, 2016

The Department offers a program leading to the Master of Science (MS) in Finance Each candidate's program is planned with the help of the MS Finance Program Director and the MS Finance Program Committee. The MS in Finance degree program provides students with the theoretical financial knowledge and analytical skills to be innovative, well-informed and experienced finance professionals. Initial provisional status of the program was granted on January 8, 2008 and permanent status was approved on March 7, 2016.

#### ADMISSION REQUIREMENTS

Qualified applicants for admission in the MS Finance program must:

- Supply all information required by the University for admission to a graduate program as stated in the University of Delaware Catalog.
- Hold the equivalent of a 4-year U.S. Bachelor's Degree from an accredited college or university (except as described in the 4+1 BS/MS Option, below).
- Complete the online application for admission to the MSF program: <a href="http://www.udel.edu/gradoffice/applicants/">http://www.udel.edu/gradoffice/applicants/</a> and submit official transcripts of all previous academic work
- Submit official results of the Graduate Records Examination (GRE) or the Graduate Management Admissions Test (GMAT) (except as described in the 4+1 BS/MS Option, below). The MS Finance program director can waive the GRE/GMAT requirement in cases of exceptional work experience or other special factors.
- Submit a resume and application essay on the following topic:
  - Specifically, how will an MS in Finance from the Lerner College of Business and Economics at the University of Delaware help you achieve your professional goals?
- Submit two letters of recommendation from faculty and/or employers.

For applicants whose native language is not English, the University requires an official paper-based Test of English as a Foreign Language (TOEFL) score of at least 600, at least 250 on the computer-based TOEFL, or at least 100 on the Internet-based TOEFL for an applicant to be considered for admission. Also accepted is a minimum score of 7.5 on the International English Language Testing System (IELTS) exam. This requirement may be waived if the student has earned a degree from an accredited educational institution in a country where English is the primary language.

Applicants need not have majored in any specific undergraduate field, unless applying through the 4+1 BS/MS in Finance option. The following should be considered as *preferred minimum levels* for admission:

- Strong written and oral communication skills
- Undergraduate GPA of 3.0 (on a 4.0 scale)
- A combined score of 300 on the verbal and quantitative portions of the GRE (1050 on previous concordance table) or score at or above the 55th percentile on the GMAT.

Incoming students are expected to understand the fundamentals of finance and accounting concepts as presented in FINC650 Financial Management and ACCT800 Financial Reporting and Analysis, have basic computer skills equivalent to those taught in ACCT 160 Introduction to Business Information Systems I and have taken the college level equivalents to MATH 221 Calculus and MATH 230 Finite Mathematics with Applications. The admissions committee will examine each accepted applicant's transcripts and work experience to determine if these prerequisites have been satisfied. Students deficient in any of the admission requirements or pre-requisites may be admitted on provisional status and be required to complete non-degree credit coursework. Such determination is made by the MS Finance Program Committee.

Admission to the graduate program is competitive. Those who meet stated requirements are not guaranteed admission, nor are those who fail to meet all of those requirements necessarily precluded from admission if they offer other appropriate strengths. Admission decisions are made by the MS Finance Program Committee and are based upon a number of factors, including the applicant's GMAT or GRE scores, college transcripts, application essays and letters of recommendation.

Admissions will occur on a rolling basis, so early application may improve chances for admission and financial assistance, if applicable. While the published application deadline for the fall semester is June 1<sup>st</sup> (international) or July 1<sup>st</sup> (domestic) and for the spring semester November 15<sup>th</sup> (international) or January 1<sup>st</sup> (domestic), applications are accepted after those dates. Applications can be submitted before taking the GRE or GMAT. Please indicate on your application the scheduled date of your GRE or GMAT exam. However, late exam submission will delay application processing and the admission decision.

#### Admission on Provisional Status

- Students deficient in any of the admission requirements or pre-requisites may be admitted on provisional status and be required to complete non-degree credit coursework. Such determination is made by the MS Finance Program Committee.
- Students admitted on provisional status will be notified in writing by the MS in Finance Program Committee in their acceptance letter of the requirements that need to be met for obtaining regular status in the program.
- Students admitted on provisional status may be required to complete course work that will not count towards the degree and this course work may be required to be completed before the student can take courses that satisfy degree requirements.
- Students admitted on provisional status may be required to pass proficiency tests as a condition for obtaining regular status in the program.

#### Admission through the 4+1 BS/MS in Finance

Interested students should apply in the second semester of their junior year. The Graduate Record Examination (GRE) or Graduate Management Admission Test (GMAT) will be waived; all other requirements for admission (online application, an essay, two letters of recommendation and a resume) are the same as for external applicants to the program.

# MASTER OF SCIENCE REQUIREMENTS

# Program of Study

A minimum of 30 credits is required for the Master of Science degree. Degree candidates are required to have a program of study approved by the MS Finance Program Director prior to matriculation or, if entering through the 4+1 program, during their senior year of completing the BS in Finance. The program of study consists of the list of the courses the student intends to take to satisfy the MS in Finance degree requirements. Any revisions in the program of study must be approved by the MS Finance Program Director prior to the student registering for courses not previously approved in their program of study.

#### **Prerequisites**

- Undergraduate calculus equivalent to MATH 221 Calculus and MATH 230 Finite Mathematics with Applications
- Basic computer skills equivalent to ACCT 160 Introduction to Business Information Systems I
- Understanding of fundamental finance and accounting concepts as presented in FINC650 Financial Management and ACCT 800 Financial Reporting and Analysis. (For 4+1 students the fundamental finance and accounting concepts are as presented in FINC311, ACCT207 and ACCT208.)

#### **Required Courses**

#### Financial Analytics Core - 9 credits:

|                    |                                                                                | Credits |
|--------------------|--------------------------------------------------------------------------------|---------|
| FINC670            | Theory of Financial Decision Making                                            | 3       |
| FINC671            | Workshop in Finance: Seminar                                                   | 3       |
| FINC672            | Workshop in Finance: Empirical Research                                        | 3       |
| Applied Arcredits: | nalytics Module – 9                                                            | Credits |
| FINC651<br>or      | Corporate Financial Analysis                                                   | 3       |
| FINC619<br>FINC652 | Financial Modeling and Valuation<br>Investment Analysis & Portfolio Management | 3       |

# Data Skills Module - 6

| credits: |                                                        | Credits |
|----------|--------------------------------------------------------|---------|
|          | Applied Econometrics I<br>Financial Statement Analysis | 3<br>3  |
|          |                                                        | Cradita |

Derivative Securities and Risk Management

3

6

Fixed Income Securities

Credits Electives - 6 credits

#### 4+1 Program of Study

orFINC616

FINC662

While completing the BS in Finance degree, during the senior year, students will take six (6) credits of graduate-level courses from any of the required or elective Finance courses. These six credits will be in lieu of the regular B.S. choices from:

FINC 412, 413, 415, 416, 418, 419 or 462. The six credits will be counted towards both the Bachelor of Science degree and the Master of Science degree.

#### **Financial Analytics Core**

This sequence is a key unique feature of our financial analytics based program and consists of three required courses FINC670 Theory of Financial Decision Making, FINC671 Workshop in Finance: Seminar, and FINC672 Workshop in Finance: Empirical Research. The remainder of the courses in the program consists of classes that are shared with MBAs, and therefore provide a managerial perspective on the topics within financial analytics. The Financial A n allytics Core courses are different in that they provide a social scientific perspective. This provides students with a solid foundation as to why finance recommends the analytical procedures and judgment calls that it does. This should help students be better prepared for the strategic thinking that will come in the longer run of their careers, and to be more cognizant of unexpected opportunities or risks in the analyses they produce in the shorter run.

This sequence is also special in that it is an organized sequence, with a foundations course before the hands-on course and the readings course. Students gain a common language, tools, and theory foundation of financial analytics. The second two courses work better because of the first one. A sequence is somewhat rare in the context of short masters programs. This sequence also demonstrates a level of Departmental commitment to the Program, in that these courses are essentially taken only by MSF students (with a few exceptions for Econ PhD students).

FINC670 Theory of Financial Decision Making is a graduate-level course on the branch of microeconomics called financial economics. This course has been developed for M.S. students in finance and is also appropriate for Master and Ph.D. students in Economics. The topics in this course form the necessary building blocks and theoretical underpinnings for using big financial data for all of the traditional topics in finance including corporate finance, investments, financial markets and institutions and derivatives.

FINC671 is graduate-level overview of key scientific topics in financial economics, intended for students who have high-level goals in the practice of finance. Unlike most courses in finance for practical people---but like courses in some other social and physical sciences---we read, discuss, and write about the scientific literature in finance. The objective is to provide a well-grounded understanding of how the science learns about these core areas. The overarching goal is to provide students a long-term career edge via developing skills to be able to continue to develop their finance knowledge over time as the knowledge of the field progresses. The course works with fundamental topics on which the students have textbook knowledge, such as market efficiency, asset pricing, market microstructure, information flow and securities

issuance. Additionally, the course includes substantial material on predictive analytics and the application of machine learning to finance issues including computational examples in R to explicate empirical methods, as well as coverage of machine learning methods such as boosted regression trees as incorporated in published articles.

In FINC672, students use empirical methods and financial datasets to improve t heir understanding of markets by testing various hypotheses central to financial ec onomics. Students analyze portfolio choice problems, asset pricing models (CAPM and multifactor models), portfolio performance and risk measures, market efficiency, and market microstructure in significant depth. Students learn to implement financial models and perform financial analytics using computer programming tools and financial datasets from CRSP, Compustat, Datastream, and the Bloomberg system.

The objective of this course is to provide an overview of empirical research in finance. This course is divided into two main parts. In the first part students develop fundamental programming knowledge and data science skills in the Julia programming language. This part of the course is an intensive introduction to procedures for collecting, processing, and analyzing financial datasets which become increasingly important with the emergence and popularization of "big data" in finance. The second part of the course covers widely-used state-of-the-art statistical methodologies in empirical asset pricing. Students will learn to apply programming techniques to real-world empirical research questions in financial markets.

#### Applied Analytics Module

The Applied Analytics Module includes three other courses that are required in the current curriculum. This combination of courses insures that students received a well-rounded education in the application of financial analytics.. The combination of the Financial Analytics Core and Applied Analytics Module will allow students to integrate theory into practice.<sup>1</sup>

#### **Data Skills Module**

The Data Skills Module gives the student the skill needed to access financial information and understand that information. Upon completing the Data Skills Module, students will be able to work with big financial data and be prepared to learn empirical methodologies.

#### **Electives**

Students may choose courses from the following list but are not limited to courses on the list. Other courses may be used towards the degree requirements if submitted as part of the student's program of study and approved by the MS Finance Program Director prior to registration in the course. The MS Finance Program Director will decide on whether a particular variation from the stated

degree requirements is allowed.

For elective courses offered outside the Department of Finance, students will have to meet all listed prerequisites or receive approval from the instructor.

<sup>&</sup>lt;sup>1</sup> For students with sufficient background, other FINC electives may be substituted for courses in the Finance Practice Module. For example, students who have experiences in portfolio management would not be expected to take FINC652 Investment Analysis & Portfolio Management.

|          | Elective Courses                             | Credits |
|----------|----------------------------------------------|---------|
| FINC630  | Fintech & Data Science for Finance           | 3       |
| FINC651  | Corporate Financial Analysis                 | 3       |
| FINC652  | Investment Analysis and Portfolio Management | 3       |
| FINC615  | International Finance                        | 3       |
| FINC654  | Special Topics in Finance                    | 3       |
| FINC612  | Capital Markets & Financial Institutions     | 3       |
| FINC616  | Derivative Securities and Risk Management    | 3       |
| FINC658  | Corporate Governance                         | 3       |
| FINC619  | Financial Modeling and Valuation             | 3       |
| FINC667  | Various Topics                               | 3       |
| FINC842  | Financial Services: Risk                     |         |
| ECON600- | level courses with permission of Director    |         |
| ACCT614  | Federal Tax Research and Planning            | 3       |

## **Credit Summary:**

| Total Credits                    | 30       |
|----------------------------------|----------|
| Elective Classes                 | <u>6</u> |
| Required Skills Module Classes   | 6        |
| Required Practice Module Classes | 9        |
| Required Theory Module Classes   | 9        |

# SAMPLE COURSE OF STUDY\*

| Sample Accelerated Program                      | Sample Full-time Program                        |  |  |  |
|-------------------------------------------------|-------------------------------------------------|--|--|--|
| Year 1 - Fall                                   |                                                 |  |  |  |
| FINC651 Corporate Financial Analysis            | FINC670 Theory of Financial Decision Making     |  |  |  |
| FINC652 Investment Analysis & Portfolio Mgmt.   | ECON622 Applied Econometrics I                  |  |  |  |
| FINC670 Theory of Financial Decision Making     | FINC651 Corporate Financial Analysis            |  |  |  |
| ECON622 Applied Econometrics I                  |                                                 |  |  |  |
| Year 1 - Winter                                 |                                                 |  |  |  |
| Elective 1                                      | Elective 1                                      |  |  |  |
| Elective 2                                      |                                                 |  |  |  |
| Year 1 - Spring                                 |                                                 |  |  |  |
| FINC671 Workshop in Finance: Seminar            | FINC662 Fixed Income Securities                 |  |  |  |
| FINC672 Workshop in Finance: Empirical Research | FINC671 Workshop in Finance: Seminar            |  |  |  |
| FINC662 Fixed Income Securities                 | FINC672 Workshop in Finance: Empirical Research |  |  |  |
| ACCT625 Financial Statement Analysis            |                                                 |  |  |  |
| Year 2 - Fall                                   |                                                 |  |  |  |
|                                                 | ACCT625 Financial Statement Analysis            |  |  |  |
|                                                 | FINC652 Investment Analysis & Portfolio Mgmt.   |  |  |  |
|                                                 | Elective 2                                      |  |  |  |

#### SAMPLE COURSE OF STUDY FOR 4+1 PROGRAM

| Sample 4+1Program                                         |  |  |  |  |
|-----------------------------------------------------------|--|--|--|--|
| B.S. Senior Year - Spring                                 |  |  |  |  |
| FINC6xx Required or Elective Course*                      |  |  |  |  |
| FINC6xx Required or Elective Course*                      |  |  |  |  |
| Other undergraduate courses to finalize B.S. requirements |  |  |  |  |
| Summer                                                    |  |  |  |  |
| FINC6xx From: FINC651,652,615,654                         |  |  |  |  |
| M.S. Year 1 -Fall                                         |  |  |  |  |
| FINC670 Theory of Financial Decision Making               |  |  |  |  |
| ECON622 Applied Econometrics I                            |  |  |  |  |
| ACCT625 Financial Statement Analysis                      |  |  |  |  |
| Winter                                                    |  |  |  |  |
| FINC6xx From: FINC651,652,615,654                         |  |  |  |  |
| M.S. Year 1 - Spring                                      |  |  |  |  |
| FINC671 Workshop in Finance: Seminar                      |  |  |  |  |
| FINC672 Workshop in Finance: Empirical Research           |  |  |  |  |
| FINC6xx Required or Elective Course*                      |  |  |  |  |
| •                                                         |  |  |  |  |

<sup>\*</sup>Chosen from FINC 630, 651, 652, 615, 616, 658, 619, 662, 667, 842

#### PROGRESS TOWARDS DEGREE

Maintenance of steady, reasonable progress towards the degree is the responsibility of the student. A normal load for a regular full-time student will be 9-12 credits in the fall semester followed by 3-6 credits in the winter, and 9-12 credits in the spring semester. For a part-time student, a normal load will be 6 credits per semester, plus 3 credits during each winter semester.

The University requires that the master's degree be completed within ten consecutive semesters. If accepted into the program as a full-time student with a strong background in finance, the 30-credit degree program may be completed in nine months (the accelerated program) or one year by 4+1 students. Other full-time students may complete the program in eighteen months and part-time students may complete the program in twenty-one months.

Any shortcomings in progress will be communicated in writing by the MS Finance Program Director to the student and to the University Office of Graduate and Professional Education.

Graduate students must maintain a minimum GPA of 3.00 to remain in good academic standing. GPA requirements are monitored by the Office of Graduate and Professional Education according to the GPE Academic Probation Policy.

#### FINANCIAL AID

Students wishing to be considered for financial aid should so indicate on their application for admission. Students may also apply for financial aid after being accepted to the program. Conditional on funding, students may be selected for merit-based financial awards by the MS Finance Committee. Students may be selected as research and/or teaching assistants for faculty. Conditional on funding, support for a student may last up to 2 years as long as progress toward the degree is satisfactory.

Students are encouraged to explore external funding opportunities through their employers or through other granting agencies.

#### Responsibilities of students on contract

If a student does receive funding, it will be provided in a manner consistent with UD statement on Graduate Student Funding. In particular, "funding may be available for selected students on a continuing basis if the student maintains satisfactory progress toward the completion of the degree." There are 5 aspects of satisfactory progress:

- 1. Academic performance/grades; a cumulative GPA of 3.0 must be maintained in course work each semester throughout the program;
- 2. Full compliance with the University's Code of Conduct;
- 3. Fulfillment of degree requirements, making timely progress in required course work;
- 4. Satisfactory performance in teaching and research assignments;
- 5. Submission of student initiated annual progress reports signed by the MS Finance Program Director.

#### Evaluation of students on contract

Students on contract will be reviewed at the end of each semester by their assigned faculty member, and by the MS Finance Program Director. Student reviews will be based on the quality and quantity of work they performed for the faculty member.

#### GENERAL STUDENT RESPONSIBILITIES

- Students are required to furnish the Department of Finance with current addresses and phone numbers. All PNPI data will be maintained in the Department Chair office files (306 Purnell Hall).
- Students are expected to monitor their UD email account. Official notices and program information will be sent via UD email.
- Students are responsible for being familiar with the University Academic Regulations for Graduate Students published in the Graduate Catalog.

### EFFECTIVE DATE AND NOTIFICATION TO STUDENTS

The requirements and guidelines stated herein are in effect for students entering the graduate program as of September 1, 2022.

All students applying for admission may download this set of guidelines and information on the Department website.