

Milestones for a PhD in Finance

Entry requirements: Prior to joining the program, students will be expected to have completed coursework in multi-variable calculus, linear algebra, statistics, and game theory. If grades for these classes do not appear on a student's transcript, then that student is expected to receive certification from a college, from Coursera or an equivalent MOOC, or elsewhere, prior to joining the program. Students will also be expected to attend the economics department math camp, which requires multi-variable calculus and statistics as pre-requisites.

Coursework: The goal of the program is to give students the ability to generate new theory and empirical results. The mandatory coursework can be grouped into three sets. First are classes in microeconomics, statistics, and macroeconomics. These are taken in the economics department.

Registration for coursework must be done in consultation with the finance doctoral program director.

Year 1: Fall semester

ECON 7010: Microeconomic Theory 1

ECON: 7020: Macroeconomic Theory 1

ECON 7818: Mathematical Statistics for Economists

Year 1: Spring semester

ECON 7030: Microeconomic Theory 2

ECON 7040: Macroeconomic Theory 2 (recommended)

ECON 7828: Econometrics

Year 2: Fall Semester

ECON 7050: Advanced Economic Theory (recommended)

Second are six courses in finance, described below. The goal of these courses is to teach how to use (and how not to use) tools, and student assignments should largely involve projects in which those tools are used. These six courses are split into two sets of three, which are taught in alternating years. Official course names and numbers are TBD.

Block #1: Asset Pricing

Fall semester:

- 1) Asset Pricing

Spring semester:

- 1) Structural Economics and Finance
- 2) Textual Analysis

Block #2: Corporate Finance

Fall semester:

- 1) Empirical Methods in Finance 1

Spring semester:

- 1) Empirical Methods in Finance 2
- 2) Finance Theory

Third are electives, and the choice of electives is at the student's discretion. We suggest electives in economic theory, applied mathematics (stochastic processes and stochastic calculus) and computer programming. A minimum of 30 credit hours of coursework and 30 dissertation hours are required for the program. Finance doctoral students must maintain a minimum cumulative 3.3 GPA.

Mandatory reading

In addition to coursework, students will be expected to read and understand 100 papers in finance that are separate from classes. Half will be "classic" papers and the other half cutting edge. Classic papers form the canon of the field, and all professors are expected to understand the ideas in them simply by the names of the authors. Cutting-edge papers will orient students toward areas where research is likely to be fruitful and impactful. This set of papers will evolve with each cohort of students, and the faculty will be expected to contribute toward determining that set.

Post-seminar debriefings

Students will also be required to attend a ½ hour post-seminar debriefing, run by whomever is responsible for the speaker's invitation. At these debriefings, faculty and students will discuss the papers that they just saw: what journal is the paper likely to be published in? Why was the paper good/interesting/well-

done? What needs to be improved before publication and how can the authors make those changes? What faculty comments were likely not central to the conversation? What was good and bad about the talk, in terms of presentation style, speaker control of the audience, etc.?

Comprehensive exams

At the end of the first year, students will sit for the microeconomics comprehensive exam. At the end of the second year, students will sit for the finance comprehensive exam, which covers material from all six classes as well as the mandatory readings and seminar presentations. Students will write a solo-authored paper in the summer after the second year and present it orally in September of the third year. In each case, a retake may be offered at the discretion of the faculty.

Expectations for progress in the program

Our goal is for each student to work with an advisor during her second year in the program to produce a jointly-authored paper. This research experience will be useful in the student's progress toward her second-year paper. In a student's third and fourth years she is once again expected to produce a jointly-authored paper with an advisor, ideally on a topic that is closely related to her research agenda. In the fourth year, she is expected to write a solo-authored "job-market paper", that she will use to get a job in the fifth year. Our goal is for each student to have two solo-authored and at least two jointly-authored papers when she goes on the job market.

Dissertation proposal and defense

When a student has settled upon a research agenda, she should propose that to a selected committee of five faculty, one of whom is outside of Leeds. This proposal should represent a substantial effort on the part of the student to develop a research program and provide the committee enough information to determine whether it is likely to succeed. The student should expect extensive feedback from the committee on the proposal and use that feedback in developing her dissertation. Once she has completed her dissertation, a student should defend before the committee. Passing the proposal and defense are the final hurdles to the granting of a PhD.