

## Credential in Quantitative Financial Economics (QFE)

To be offered by the UNC Department of Economics during the academic year 2016-2017

**Goal:** The QFE credential will provide students with both the theoretical knowledge of financial markets and the practical experience of financial-market transactions. This combination of classroom study and practical application will lead to a more detailed and profound understanding of the economics of financial markets.

The QFE credential will also introduce students to the tools and skills necessary to be effective financial-market participants in their post-graduate lives. They will acquire a familiarity with the general workings of the financial market and its connections to the real economy. They will also acquire fluency in asset pricing and portfolio allocation, with a special emphasis on the quantitative tools necessary for estimation, testing, and optimization. Students will be exposed to advanced quantitative tools as Matlab, structured data storage, computational clusters, and APIs for real-time data extraction.

**To earn the credential:** a student will complete three courses.

- (1) Econ 423: The Economics of Financial Markets
- (2) Econ 523: Advanced Topics in Financial Markets
- (3) Econ 493: Practicum in Quantitative Financial Economics

Econ 423 and Econ 523 are 3-credit courses and count towards the major in Economics. (Econ 523 will meet the major's requirement for a 500-level course.) Econ 493 is a one-credit course and does not count as a course towards the major. Students will take Econ 423 in the fall semester and Econ 493 and Econ 523 in the spring semester. Students completing Econ 423 previously can also enroll in the spring.

**Course style and content:** Econ 423 is a highly interactive lecture course with equal emphasis on theoretical findings and empirical results. Econ 523 is a small seminar course built around intensive application of financial-market tools to a small number of real-world financial-market phenomena: examples could include asset pricing anomalies within the equity market, the impact of negative interest rate policy on fixed income liquidity premia, or carry trade in the foreign exchange markets. Students will be expected to participate actively and to write a 20-page paper on one of these topics. Econ 493 is a practicum meeting once per week. There will be a specific market assignment each week for the students to complete and evaluate: the assignments will test the students' understanding of practical aspects of financial markets as well as financial economic theory.

**Instructional team:** Michael Aguilar and Andrew Graczyk will teach the Econ 423 course in the fall; either will prepare students for the credential. Professor Aguilar will teach Econ 523 in the spring and will supervise Econ 493. Students will be assisted in their work in the practicum by Gonzalo de Asis Ruiz.

---

This credential is a component of our Nasdaq Initiative in Quantitative Financial Economics. Thanks to the Nasdaq Educational Foundation for its funding support.

August 2016