MINOR IN FINANCIAL COMPUTATION AND MODELING

Program Learning Outcomes for the Minor in Financial Computation and Modeling

Upon completing the minor in Financial Computation and Modeling, students will be able to:

1. Demonstrate knowledge of statistical, mathematical, and computational techniques and methods and how to choose and apply appropriate methods to questions or problems in the field of finance.
2. Understand the basic concepts of Economic Theory and how they apply to financial markets as well as how financial markets impact global economies.
3. Demonstrate an understanding of basic financial databases and the ability to use technologies, like R and Excel, to model and solve financial problems.
4. Understand core quantitative modeling concepts and demonstrate key skills necessary for working in the field of finance and investing.
5. Demonstrate the ability to understand, interpret, and critically evaluate empirical financial studies and investment strategies.

Requirements for the Minor in Financial Computation and Modeling

Students pursuing the minor in Financial Computation and Modeling must complete:

- A minimum of 6 courses (19-20 credit hours, depending on course selection) to satisfy minor requirements.
- A minimum of 5 courses (16 credit hours) taken at the 300-level or above.

The courses listed below satisfy the requirements for this minor. In certain instances, courses not on this official list may be substituted upon approval of the minor’s academic advisor, or where applicable, the Program Director. (Course substitutions must be formally applied and entered into Degree Works by the minor’s Official Certifier [https://registrar.rice.edu/facstaff/degeworks/officialcertifier/]). Students and their academic advisors should identify and clearly document the courses to be taken.

Summary

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Total Credit Hours Required for the Minor in Financial Computation and Modeling</td>
<td>19-20</td>
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Minor Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Core Requirements</td>
<td>ECON 100 PRINCIPLES OF ECONOMICS</td>
<td>3</td>
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<tr>
<td>ECON 310 / STAT 376</td>
<td>PROBABILITY AND STATISTICS</td>
<td>3-4</td>
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Elective Requirements

Select 3 courses from the following 4 groups:

- **Group I**
  - ECON 418 ECONOMIC FORECASTING
  - or STAT 421 APPLIED TIME SERIES AND FORECASTING

- **Group II**
  - ECON 449 PRINCIPLES OF FINANCIAL ENGINEERING
  - or STAT 449 QUANTITATIVE FINANCIAL RISK MANAGEMENT

- **Group III**
  - ECON 443 FINANCIAL ECONOMICS
  - STAT 486 MARKET MODELS

- **Group IV**
  - BUSI 343 FINANCIAL MANAGEMENT
  - or CAAM 467 OPTIMIZATION METHODS IN FINANCE
  - or ECON 343 CORPORATE FINANCE
  - or ECON 355 FINANCIAL MARKETS
  - or ECON 422 INTERNATIONAL ECONOMICS AND FINANCE
  - or ECON 455 MONEY AND BANKING
  - or STAT 482 QUANTITATIVE FINANCIAL ANALYTICS
  - or STAT 487 SOCES BLOCKCHAIN AND CRYPTOCURRENCIES

Total Credit Hours: 19-20

Footnotes and Additional Information

1. A maximum of 1 course (3 credit hours) can be taken from each group to satisfy Elective Requirements.

Policies for the Minor in Financial Computation and Modeling

Program Restrictions and Exclusions

Students pursuing the minor in Financial Computation and Modeling should be aware of the following program restriction:

- As noted in Majors, Minors, and Certificates (https://ga.rice.edu/undergraduate-students/academic-opportunities/majors-minors-certificates/), i) students may declare their intent to pursue a minor only after they have first declared a major, and ii) students may not major and minor in the same subject.

Transfer Credit

For Rice University’s policy regarding transfer credit, see Transfer Credit (https://ga.rice.edu/undergraduate-students/academic-policies-procedures/transfer-credit/). Some departments and programs have additional restrictions on transfer credit. The Office of Academic Advising maintains the university’s official list of transfer credit advisors on their website: https://oaa.rice.edu. Students are encouraged to meet with their academic program’s transfer credit advisor when considering transfer credit possibilities.
Program Transfer Credit Guidelines
Students pursuing the minor in Financial Computation and Modeling should be aware of the following program-specific transfer credit guidelines:

- Requests for transfer credit will be considered by the program director (and/or the program's official transfer credit advisor) on an individual case-by-case basis.

Additional Information
For additional information, please see the Students (Undergraduate) page on the Center for Computational Finance and Economic Systems website: https://cofes.rice.edu/

Opportunities for the Minor in Financial Computation and Modeling

Academic Honors
The university recognizes academic excellence achieved over an undergraduate's academic history at Rice. For information on university honors, please see Latin Honors (https://ga.rice.edu/undergraduate-students/honors-distinctions/university/) (summa cum laude, magna cum laude, and cum laude) and Distinction in Research and Creative Work (https://ga.rice.edu/undergraduate-students/honors-distinctions/university/). Some departments have department-specific Honors awards or designations.

Finance Seminar
Students pursuing the FCAM minor have the opportunity to participate in STAT 499 Computational Finance Seminar for 1 credit hour. Students are also encouraged to take part in the annual Eubank Conference on Real World Markets and join the student computational finance club.

Internship and Research Opportunities
The Center for Computational Finance and Economic Systems (CoFES) and the Department of Statistics encourages the practice of quantitative finance through summer internships, employment and research. Information on current opportunities are distributed to students through an FCAM email list.

Additional Information
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