**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 7 courses (20-23 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/dregeworks/officialcertifier/]). Students and their academic advisors should identify and clearly document the courses to be taken.

**Summary**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total Credit Hours Required for the Minor in Financial Computation and Modeling</td>
<td>20-23</td>
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**Minor Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Core Requirements</td>
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</tr>
<tr>
<td>ECON 100</td>
<td>PRINCIPLES OF ECONOMICS</td>
<td>3</td>
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<tr>
<td>STAT 310 / ECON 307</td>
<td>PROBABILITY AND STATISTICS</td>
<td>3-4</td>
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<tr>
<td>or STAT 311</td>
<td>HONORS PROBABILITY AND MATHEMATICAL STATISTICS</td>
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<tr>
<td>or STAT 315 / DSCI 301</td>
<td>PROBABILITY AND STATISTICS FOR DATA SCIENCE</td>
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<td>STAT 376 / ECON 310</td>
<td>ECONOMETRICS</td>
<td>4</td>
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<tr>
<td>or STAT 410</td>
<td>LINEAR REGRESSION</td>
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<tr>
<td>STAT 499</td>
<td>MATHEMATICAL SCIENCES SEMINAR</td>
<td>1-3</td>
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**Elective Requirements**

Select 3 courses from the following 2 groups:

**Group I**

- CMOR 451 SIMULATION MODELING AND ANALYSIS
- CMOR 455 STOCHASTIC CONTROL AND APPLICATIONS
- CMOR 462 OPTIMIZATION METHODS IN FINANCE
- ECON 449 PRINCIPLES OF FINANCIAL ENGINEERING
- ECON 455 MONEY AND BANKING
- ECON 479 ECONOMIC MODELING AND PUBLIC POLICY
- STAT 421 APPLIED TIME SERIES AND FORECASTING
- STAT 449 QUANTITATIVE FINANCIAL RISK MANAGEMENT
- STAT 487 COFES BLOCKCHAIN AND CRYPTOCURRENCIES

**Group II**

- BUSI 343 FINANCIAL MANAGEMENT
- ECON 343 CORPORATE FINANCE
- ECON 355 FINANCIAL MARKETS
- ECON 422 INTERNATIONAL ECONOMICS AND FINANCE
- STAT 482 QUANTITATIVE FINANCIAL ANALYTICS
- STAT 486 MARKET MODELS

**Total Credit Hours**

20-23

**Footnotes and Additional Information**

1 A minimum of 1 course (3 credit hours) must 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/](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/](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](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. **2023-2024 General Announcements PDF Generated 08/28/23**
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 Mathematical Sciences 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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