BACHELOR OF ARTS (BA) DEGREE WITH A MAJOR IN STATISTICS

Program Learning Outcomes for the BA Degree with a Major in Statistics

Upon completing the BA degree with a major in Statistics, students will be able to:

1. Apply fundamental theory in probability and statistical inference.
2. Apply and evaluate statistical models.
3. Apply statistical computing for data analysis and data science.
4. Demonstrate competency as a professional statistician.
5. Effectively communicate as a professional statistician.

Requirements for the BA Degree with a Major in Statistics

For general university requirements, see Graduation Requirements (https://ga.rice.edu/undergraduate-students/academic-policies-procedures/graduation-requirements/). Students pursuing the BA degree with a major in Statistics must complete:

• A minimum of 16 courses (49-56 credit hours, depending on course selection) to satisfy major requirements.
• A minimum of 120 credit hours to satisfy degree requirements.
• A minimum of 11 courses (34 credit hours) taken at the 300-level or above.
• A maximum of 3 courses (9 credit hours) from study abroad or transfer credit. For additional departmental guidelines regarding transfer credit, see the Policies tab.

The courses listed below satisfy the requirements for this major. In certain instances, courses not on this official list may be substituted upon approval of the major’s academic advisor, or where applicable, the department’s Director of Undergraduate Studies. (Course substitutions must be formally applied and entered into Degree Works by the major’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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>Total Credit Hours Required for the Major in Statistics</td>
<td>49-56</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours Required for the BA Degree with a Major in Statistics</td>
<td>120</td>
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Degree Requirements

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<tr>
<th>Code</th>
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<th>Credit Hours</th>
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<td></td>
<td>Total Credit Hours Required for the Major in Statistics</td>
<td>49-56</td>
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Core Requirements

Mathematics

<table>
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<th>Code</th>
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<tbody>
<tr>
<td>MATH 101</td>
<td>SINGLE VARIABLE CALCULUS I</td>
<td>3</td>
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<tr>
<td>or MATH 105</td>
<td>AP/OTH CREDIT IN CALCULUS I</td>
<td></td>
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</table>
Electives outside Statistics (STAT), however, other courses may be approved electives. The following courses are a sample of approved outside departmental (STAT) course offerings may be chosen to fulfill the Senior Capstone requirement, this course may not be used as an Approved Elective. Completed to fulfill the Senior Capstone requirement, this course may not be used as an Approved Elective.

With advisor approval, 1 course (3 credit hours) from departments other than Statistics may be used as an elective. The substitution course may not be used as a replacement for 1 of the 3 required methodology/theory courses listed above. STAT 305, STAT 310, STAT 315 and STAT 385 will not count as electives. See below for typically approved coursework.

With advisor approval, up to 1 course (3-4 credit hours) from departments other than Statistics may be chosen to fulfill Elective Requirements. The following courses are a sample of approved electives outside Statistics (STAT), however, other courses may be approved by an advisor.

Approved Electives

With advisor approval, up to 1 course (3-4 credit hours) from departments other than Statistics may be chosen to fulfill Elective Requirements. The following courses are a sample of approved electives outside Statistics (STAT), however, other courses may be approved by an advisor.

## Code | Title | Credit Hours
--- | --- | ---
COMP 322 / ELEC 323 | PRINCIPLES OF PARALLEL PROGRAMMING | 3-4
COMP 330 | TOOLS AND MODELS FOR DATA SCIENCE | 3-4
COMP 382 | REASONING ABOUT ALGORITHMS | 3-4
COMP 422 | PARALLEL COMPUTING | 3-4
COMP 430 | INTRODUCTION TO DATABASE SYSTEMS | 3-4
COMP 440 / ELEC 440 | ARTIFICIAL INTELLIGENCE | 3-4
COMP 441 | LARGE-SCALE MACHINE LEARNING | 3-4

## Bachelor of Arts (BA) Degree with a Major in Statistics

### Programs for the BA Degree with a Major in Statistics

#### Program Restrictions and Exclusions

Students pursuing the major in Statistics should be aware of the following program restriction:

- Students pursuing the minor in Data Science may fulfill its requirements according to the following guidelines: i.) DSCI 301 is fulfilled by STAT 310 or STAT 315; ii.) DSCI 302 may be used as the STAT major’s Advanced Computing elective; and iii.) DSCI 303 must be substituted with STAT 413.

#### 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](https://oaa.rice.edu). Students are encouraged to meet with their academic program’s transfer credit advisor when considering transfer credit possibilities.

#### Departmental Transfer Credit Guidelines

Students pursuing the major in Statistics should be aware of the following departmental transfer credit guidelines:
• No more than 3 courses (9 credit hours) of transfer credit from U.S. or international universities of similar standing as Rice may apply towards the major.
• 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 Statistics website: https://statistics.rice.edu/.

Opportunities for the BA Degree with a Major in Statistics

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://qa.rice.edu/undergraduate-students/honors-distinctions/university/) (summa cum laude, magna cum laude, and cum laude) and Distinction in Research and Creative Work (https://qa.rice.edu/undergraduate-students/honors-distinctions/university/). Some departments have department-specific Honors awards or designations.

Fifth-Year Master's Degree Option for Rice Undergraduate Students
Rice students have an option to pursue the Master of Statistics (MStat) degree by adding an additional fifth year to their four undergraduate years of science and engineering studies.

Advanced Rice undergraduate students in good academic standing may apply to the MStat degree program during their junior or senior year. Upon acceptance, depending on course load, financial aid status, and other variables, they may then start taking some required courses of the master’s degree program. A plan of study will need to be approved by the student's undergraduate advisor and the MStat program director.

As part of this option and opportunity, Rice undergraduate students:

• must complete the requirements for a bachelor’s degree and the master’s degree independently of each other (i.e. no course may be counted toward the fulfillment of both degrees).
• should be aware there could be financial aid implications if the conversion of undergraduate coursework to that of graduate level reduces their earned undergraduate credit for any semester below that of full-time status (12 credit hours).
• more information on this Undergraduate - Graduate Concurrent Enrollment opportunity, including specific information on the registration process can be found here (https://qa.rice.edu/undergraduate-students/academic-opportunities/undergraduate-graduate-concurrent-enrollment/).

Internship and Research Opportunities
The Department of Statistics encourages its major and minors to participate the practice of statistics through summer internships, employment and research. Information on current opportunities are posted here: https://statistics.rice.edu/undergraduate-program/opportunities (https://statistics.rice.edu/undergraduate-program/opportunities/). Students can also approach individual faculty about research opportunities in their group. An undergraduate advisor can talk with you about these and other possibilities.