

BACHELOR OF SCIENCE WITH A MAJOR IN STATISTICS

REQUIREMENTS

The following requirements must be fulfilled:

The general requirements stated under Columbian College of Arts and Sciences, Undergraduate Programs (<http://bulletin.gwu.edu/arts-sciences/#degreeregulationstext>).

Program-specific curriculum—all courses in the major, including prerequisites, must be completed with a minimum grade of C-:

| Code | Title | Credits |
|------------------------------|--|---------|
| Prerequisite courses: | | |
| MATH 1231 | Single-Variable Calculus I | |
| MATH 1232 | Single-Variable Calculus II | |
| MATH 2233 | Multivariable Calculus | |
| STAT 1051 | Introduction to Business and Economic Statistics (or equivalent) | |
| or STAT 1053 | Introduction to Statistics in Social Science | |
| STAT 1129 | Introduction to Computing (or equivalent) | |
| or CSCI 1121 | Introduction to C Programming | |

| Code | Title | Credits |
|---------------------------------------|---|---------|
| Required courses in the major: | | |
| MATH 2184 | Linear Algebra I | |
| or MATH 2185 | Linear Algebra I for Math Majors | |
| STAT 2118 | Regression Analysis | |
| STAT 3119 | Analysis of Variance | |
| STAT 4157 | Introduction to Mathematical Statistics I | |
| STAT 4158 | Introduction to Mathematical Statistics II | |
| STAT 2183 | Intermediate Statistics Lab/Packages | |
| or STAT 4197 | Fundamentals of SAS Programming for Data Management | |

Four approved upper-division courses, some of which, in special circumstances, may be taken in other departments. To assure a balanced program, departmental approval of electives is required for all majors. Some suggested electives are:

| | |
|-----------|---|
| STAT 2112 | Business and Economic Statistics II |
| STAT 3187 | Introduction to Sampling |
| STAT 4181 | Applied Time Series Analysis |
| STAT 4188 | Nonparametric Statistics Inference |
| STAT 4189 | Mathematical Probability and Applications I |
| STAT 4198 | Special Topics |

GENERAL EDUCATION

In addition to the University General Education Requirement, undergraduate students in Columbian College must complete a further, College-specific general education curriculum—Perspective, Analysis, Communication, or G-PAC. Together with the University General Education Requirement, G-PAC engages students in active intellectual inquiry across the liberal arts. Students achieve a set of learning outcomes that enhance their analytical skills, develop their communication competencies, and invite them to participate as responsible citizens who are attentive to issues of culture, diversity, and privilege.

G-PAC approved courses, Dean's Seminars, and Sophomore Colloquia that may be available for registration are listed on the CCAS Advising website (<https://advising.columbian.gwu.edu/general-education-courses>).

Coursework for the University General Education Requirement is distributed as follows:

- Writing—one approved course in university writing and two approved writing in the disciplines (WID) courses.
- Humanities—one approved course in the humanities that involves critical or creative thinking skills.
- Mathematics or Statistics—one approved course in either mathematics or statistics.
- Natural or Physical Science—one approved laboratory course that employs the process of scientific inquiry.
- Social Sciences—two approved courses in the social sciences.

Coursework for the Columbian College general education curriculum is distributed as follows:

- Arts—one approved course in the arts that involves the study or creation of artwork based on an understanding or interpretation of artistic traditions or knowledge of art in a contemporary context.
- Global or Cross-Cultural Perspective—one approved course that analyzes the ways in which institutions, practices, and problems transcend national and regional boundaries.
- Humanities—one approved course in the humanities that involves critical thinking skills (in addition to the one

course in this category required by the University General Education Requirement).

- Local or Civic Engagement—one approved course that develops the values, ethics, disciplines, and commitment to pursue responsible public action.
- Natural or Physical Science—one approved laboratory course that employs the process of scientific inquiry (in addition to the one course in this category required by the University General Education Requirement).
- Oral Communication—one course in oral communication.

Certain courses are approved to fulfill the requirement in more than one of these categories.

Courses taken in fulfillment of G-PAC also may be counted toward majors or minors. Transfer courses taken prior to, but not after, admission to George Washington University may count toward the University General Education Requirement and G-PAC, if those transfer courses are equivalent to GW courses that have been approved by the University and the College.

SPECIAL HONORS

In addition to the general requirements stated under University Regulations, in order to be considered for graduation with Special Honors, students who seek Special Honors in statistics should check with the Department.