

Statistics, AM

Master's Candidacy

To earn a master's degree at Washington University, a student must complete all courses required by their department; maintain satisfactory academic progress; fulfill all academic and residence requirements; and file an Intent to Graduate. For a general layout of master's degree general requirements in Arts & Sciences, including an explanation of Satisfactory Academic Progress, students should review the Master's Degree Academic Information page of the Arts & Sciences *Bulletin*.

Program Requirements

- **Total Units Required: 36 units**
- **Degree Length: 3-4 semesters**
 - **Note:** Students must be enrolled in 9 graduate credits each semester to retain full-time status. As students complete their course work, if enrolled in fewer than 9 graduate credits, they must enroll in a specific Arts & Sciences graduate course that will show 0 units but does count as full-time status. Students should connect with their department to ensure proper enrollment prior to Add/Drop.

Master of Arts in Statistics

General requirements: There are 36 units of course work required and an optional thesis; 3 units may be for thesis research. The minimum residence requirement is one full academic year of graduate study. A GPA of B (3.0) or better must be maintained in graduate courses.

Optional thesis requirements: To be eligible for the thesis option, a student must maintain a cumulative GPA of 3.5 or higher in the first 18 units of courses satisfying the program requirements.

Course requirements: The student must take (or have taken) the following six required courses in statistics or their equivalents:

One of the following two sequences:

Code	Title	Units
SDS 5010 & SDS 5020	Probability and Mathematical Statistics	6
SDS 5061 & SDS 5062	Theory of Statistics I and Theory of Statistics II	6

plus:

Code	Title	Units
SDS 5071 or SDS 5130	Advanced Linear Models I Linear Statistical Models	3
SDS 5210	Statistical Computation (Or a suitable substitute elective approved by the department)	3
SDS 5310	Bayesian Statistics	3
SDS 591	Practical Training in Statistics	0

If an equivalent course has been taken and proficiency in the course material has been demonstrated, other 500-level and above electives may be substituted in consultation with the advisor. Additional 500-level or higher electives will be chosen by the student in consultation with their advisor to make up the 36 units. Typically, at most three electives shall be chosen from outside the Statistics and Data Science Department.

Information about fundamental courses and eligible electives is available on the Master's Degree Program Structure page of the Department of Statistics and Data Science website.

Accelerated AB/AM Degree in Statistics

The Department of Statistics and Data Science offers a Five-Year Accelerated Master's Degree to qualified Arts & Sciences undergraduate students at Washington University. More information about the Five-Year Accelerated Master's Degree program requirements and application process can be found on the Statistics, Accelerated AB/AM page of this *Bulletin*.

Master's Degree in Statistics for Political Science PhD Students

General requirements: This program is a tailored master's degree in statistics for graduate students in political science. Note that, while the program is designed to serve political science graduate students, it is run by the Department of Statistics and Data Science. Students interested in this program will need to begin their additional course work during their third year of study (or before). Students are encouraged to apply for the program in their third year, but they may prefer to try the additional courses first.

Requirements for admission:

- To be eligible for this program, students must have already passed Pol Sci 5052 Mathematical Modeling in Political Science, Pol Sci 581 Quantitative Political Methodology I, and Pol Sci 582 Quantitative Political Methodology II and earned a grade of A- or A in these courses. Although exceptions have been made in the grade requirements at the request of political science faculty, this decision is up to the Department of Statistics and Data Science.
- Students must obtain permission from the methodology field committee in the Department of Political Science.
- Students must formally apply to the Department of Statistics and Data Science Master of Arts program.

Modified course requirements for the degree: Students must meet the core course requirements for the traditional Master of Arts in Statistics (typically five courses), with two exceptions:

- SDS 5130 Linear Statistical Models may be replaced with Pol Sci 581 Quantitative Political Methodology I and Pol Sci 582 Quantitative Political Methodology II, with 3 additional credits produced.
- SDS 591 Practical Training in Statistics is not required.

There are three political science courses that count toward this master's degree in statistics that are required of all political science graduate students:

- Pol Sci 506 Theories of Individual and Collective Choice II
- Pol Sci 581 Quantitative Political Methodology I
- Pol Sci 582 Quantitative Political Methodology II

These additional details make a total 21 credits: 15 required credits from statistics courses, plus 3 additional credits from substituting Pol Sci 581 and Pol Sci 582 for SDS 5130 Linear Statistical Models, plus 3 credits from Pol Sci 506. Outstanding students who wish to not make the substitution can take SDS 5130 Linear Statistical Models and one additional SDS elective, but only with permission. The remaining 15 credits are completed through electives and an optional thesis.

Students may choose any electives acceptable for the traditional Master of Arts in Statistics. The following additional electives are also available for students in this program:

- Pol Sci 5024 Causal Inference
- Pol Sci 5625 Applied Statistical Programming
- Pol Sci 583 Topics in Quantitative Political Methodology:
Computational Social Science

Thesis: To be eligible for the thesis option, a student must maintain a cumulative grade point average of 3.5 or above in the first two semesters (or 18 units) of course work satisfying the program requirements. A maximum of 3 units may be used for thesis research. The thesis must be supervised by faculty with an appointment in Mathematics and Statistics (e.g., a faculty member with a joint appointment in Political Science and Mathematics and Statistics).

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