

SURVEY AND DATA SCIENCE (SURV)

Graduate Degree Program
College: Behavioral and Social Sciences

Abstract

The Survey and Data Science PhD Program blends together faculty with diverse disciplinary backgrounds, all devoted to teaching state-of-the-art practices in the statistical and methodological aspects of surveys. The program's faculty come primarily from the University of Maryland, University of Michigan, and Westat, supplemented by instructors from a number of federal statistical agencies.

Both the Master of Science (program code: SUDS (<https://academiccatalog.umd.edu/graduate/programs/survey-data-science-suds/>)) and PhD in Survey and Data Science degree programs have three areas of concentration: Statistical Science, Social and Psychological Science and Data Science.

The **statistical science** area of concentration is designed for students who wish to specialize in areas such as sample design, estimation in complex samples, variance estimation, statistical measurement error models, and statistical adjustments for missing data.

The **social science** area of concentration is designed for students who wish to specialize in areas such as questionnaire design, design of interviewing systems, computer assistance in data collection, effects of mode of data collection, cognitive psychological insights into survey measurement, and efforts to reduce various nonsampling errors in data collection.

The **data science** area of concentration is designed for students who wish to specialize in the more computational aspects of survey methodology and research involving "big data," including data visualization, management and analysis of large and messy data sets, human-computer interaction in survey research, and machine learning algorithms.

The three areas of specialization share a set of courses in the core curriculum (<https://jpsm.umd.edu/graduate/masters-sample-curricula/>), including a two term survey practicum, a course in data collection methods, two terms of statistical methods, a two term course in total survey quality, and a survey design seminar.

Financial Assistance

Financial assistance is available in the form of competitive fellowships and graduate assistantships for teaching or research.

Fellowships in Support of Diversity and Inclusion (<https://jpsm.umd.edu/graduate/phd-admissions/>): Financial support option for Ph.D. students only. If you're interested in applying for the Fellowships in Support of Diversity and Inclusion in the Behavioral and Social Sciences (2017-18), please be sure to upload your materials under "4. Supplementary Application Two" when submitting your online admissions application.

Contact

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Website: <http://www.jpsm.umd.edu>

Courses: SURV (<https://academiccatalog.umd.edu/graduate/courses/surv/>)

Keywords

Social Science Concentration: Questionnaire Design, Social and Cognitive Foundations of Survey Measurement, Analysis of Complex Data, Survey Management. Statistical Science Concentration: Statistical Methods, Topics in Sampling, Inference from Complex Surveys, Probability Theory, Mathematical Statistics, Data Science Concentration: Big Data, Data Visualization, Human-computer interaction in survey research, machine learning algorithms, analysis of large and messy data sets.

Relationships: Intermediate Survey Methodology (Z011) (<https://academiccatalog.umd.edu/graduate/programs/survey-methodology-z011/>) Survey and Data Science (online) (MPDS) (<https://academiccatalog.umd.edu/graduate/programs/survey-data-science-online-mpds/>) Survey Statistics (Z010) (<https://academiccatalog.umd.edu/graduate/programs/survey-statistics-z010/>)

ADMISSIONS

General Requirements

- Statement of Purpose
- Transcript(s)
- TOEFL/IELTS/PTE (international graduate students (<https://gradschool.umd.edu/education/z069/>))

Program-Specific Requirements

- Letters of Recommendation (3)
- CV/Resume
- Description of Research/Work Experience (optional)

Applicants to the M.S. program are expected to hold a baccalaureate degree from a regionally accredited institution with a minimum of a 'B' average. Post-baccalaureate coursework and relevant work experience will also be used in the application evaluation. Entry to the statistical science concentration requires three undergraduate courses in calculus, one in linear algebra, and one in statistics. Entry to the social science concentration requires two undergraduate quantitative courses, at least one of which is in statistics, and at least two undergraduate courses in the social sciences. Entry to the data science concentration requires some background in computer science, with a minimum of two semesters of programming coursework, and also at least one semester of statistics.

Applicants to the Ph.D. program are expected to have a graduate degree in some field (such as statistics or psychology) that is related to survey methodology. Applicants must also demonstrate an appropriate quantitative background.

For more admissions information or to apply to the program, please visit our Graduate School website (<https://gradschool.umd.edu/admissions/application-process/step-step-guide-applying/>).

Application Deadlines

Type of Applicant	Fall Deadline
Domestic Applicants	
US Citizens and Permanent Residents	January 10, 2025
International Applicants	
F (student) or J (exchange visitor) visas; A,E,G,H,I and L visas and immigrants	January 10, 2025

Other Deadlines: Please visit the program website at <http://www.jpsm.umd.edu>

REQUIREMENTS

- Survey and Data Science, Doctor of Philosophy (Ph.D.) (<https://academiccatalog.umd.edu/graduate/programs/survey-methodology-surv/survey-methodology-phd/>)

FACILITIES AND SPECIAL RESOURCES

SURV has the goal of offering training to all qualified students, regardless of the employment sector of interest to them. Several features of the program are designed with the working student in mind. Many class times are tailored to be compatible with the work day; a 12-month curriculum offers core courses throughout the year; and research experience requirements are integrated with work activities.

Courses have been offered at a Federal agency facility located in Washington, D.C. and interactive 2-way audio/video transmission equipment is used to transmit some courses between the College Park campus and the Ann Arbor campus of the University of Michigan, also - between College Park and the Census headquarters in Suitland, MD.