A mathematical statistician at the Census Bureau may work on several of the following topics during his or her career:

**Survey and Census**
- Sample design
- Census design and evaluation
- Questionnaire design

**Data Collection**
- Quality control/assurance
- Governmental/administrative records research to obtain information for census and survey programs

**Processing and Editing**
- Statistical computation
- Missing data methods research
- Statistical rules for detecting erroneous or suspicious data (edit research)
- Disclosure avoidance methodologies
- Linkage of records from different datasets

**Coverage**
- Coverage measurement
- Coverage and frame improvement
- Dual system estimation (capture-recapture)

**Estimation**
- Measurement of nonsampling error
- Response error
- Variance estimation
- Data quality measurements

**Modeling and Analysis**
- Data analysis
- Statistical modeling
- Small area estimation
- Time series analysis and seasonal adjustment

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At the U.S. Census Bureau, you will have many opportunities for personal growth:

- Work with and learn from a broad network of 350 mathematical statisticians.
- Attend seminars given by Census Bureau staff and members of the national and international statistical community.
- Present results of your methodology or research at conferences or seminars such as the Washington Statistical Society, the American Statistical Association, the American Association for Public Opinion Research, and international conferences.
- Enroll in graduate courses and have fees paid by the Census Bureau.
- Compete for positions in the master’s degree program in survey methodology at the University of Maryland, with expenses paid by the Census Bureau.
- Experience continual professional growth through reassignment to positions supporting different Census Bureau programs.

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**Special Salary and Benefits for Mathematical Statisticians**

- The pay scale for entry level mathematical statisticians starts higher than for many other federal job series.
- The Census Bureau can usually match a competing written salary offer.
- Recruitment bonuses are awarded as appropriate to new graduates and new hires from the private sector.

<table>
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<th>Grade</th>
<th>Salary</th>
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<tr>
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*Effective January 2010*

**Other benefits**

- Alternate work schedules
- Telework
- Mentoring program
- Campus-like environment just outside Washington, DC
- Fitness center
- Mass transit subsidy and access to metro
- Thrift Savings Plan (401(K) equivalent)
- Subsidized health and life insurance
- Free parking
There are three main programs areas for mathematical statisticians at the Census Bureau:

- **Decennial Census Program**—develop methodologies for sampling, estimation, quality assurance, experiments, and evaluations for the largest data collection conducted by the United States.

- **Demographic Program**—design, implement and maintain samples and frames, ensure accuracy and statistical validity, develop quality control systems, and conduct experiments and evaluations for the federal government’s principal household sample surveys.

- **Economic Program**—research, develop, implement, and evaluate statistical methods for over 100 sample surveys and censuses to measure the economic activity of the nation, including the production of the statistics for economic indicators that shape national economic policy.

Mathematical statisticians also work in the Statistical Research Division conducting methodological research, providing collaborative consultation, and providing guidance on problems requiring mathematical and statistical theory.

### Minimum Qualifications

- College Degree
- 24 semester hours in math and statistics (at least 15 in math and 6 in statistics)
- Differential Calculus I, Integral Calculus II, Multivariate Calculus III, Linear Algebra, and at least one additional junior or senior level mathematical course.

### To Apply

To apply for mathematical statistician positions, go to:
www.census.gov/hrd/www/jobs/mathstat.html

**For more information, contact:**
Kathy Ott
Methodology and Standards Council
301-763-4006
Kathleen.E.Ott@census.gov