
Industrial Stormwater and Statistics
Partnering with the Minnesota Pollution Control Agency to Teach
Introductory Statistics

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Courses

Statistics I - STAT 201 is an introductory statistics course that meets the general education requirement in mathematics at Metropolitan State University.

- Content covers descriptive and inferential statistics (hypothesis testing, two-sample inference, least squares regression).
- One section of STAT 201 with an emphasis on environmental issues will be taught for the first time in the spring semester of 2015.
- The course will emphasize environmental issues with group work, homework, and examples generated from environmental data. Students will complete semester-long group projects analyzing data for the Minnesota Pollution Control Agency.

Who Takes this Course?

- Prerequisites for the course are *Intermediate Algebra* or appropriate placement at college level math on the university's math assessment.
- Student's majors include business, criminal justice, mathematics, natural sciences, nursing, psychology, social science, and social work.

Environmental Statistics – STAT 351 is an upper division statistics course that can be used as an elective in the statistics minor at Metropolitan State University.

- Content covers T-tests, F-tests, ANOVA, MANOVA, correlation and regression (simple and multiple), principle component analysis, and cluster analysis.
- STAT 351 will be taught for the first time in the spring semester of 2016.
- The course will also incorporate semester-long group projects analyzing data for the Minnesota Pollution Control Agency.

Who Takes this Course?

Students in STAT 351 come from a wide range of academic backgrounds and majors.

- Prerequisites for the course are STAT 201 (*Statistics I*) and STAT 251 (*Statistics Programming I*)
- Metropolitan State University has a minor in statistics that attracts students from many disciplines including mathematics, computer science, natural sciences, psychology, and nursing.

How are these courses *Engaging*?

Students will be partnering with the Minnesota Pollution Control Agency (MPCA) Industrial Stormwater Division to analyze data obtained from stormwater collections by 29 different industrial sectors and 45 subsectors. The students in both courses will have the opportunity to enrich their academic experience through this collaborative effort with the MPCA.