

## Quantitative Methods Geography 391, Fall 2021

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TR 11:00-12:15 CH204

**Course Description:** Geography is a science that seeks the laws governing the spatial distribution of certain features on the surface of the Earth. Geographers frequently face the tasks to extract information from a large volume of geographic data, to forecast what will happen based on what we know, or to design a scheme to collect data to test a given hypothesis. These tasks cannot be achieved without appropriate quantitative skills. In the history of Geography, quantitative revolution occurred in the 1950s and 1960s which brought mathematic and statistical tools into the discipline that transformed it from a primarily descriptive discipline to a scientific one that integrates both regional and systematic aspects of the world. Today, quantitative methods are used in almost all areas of Geography. The goal of this course is to provide the fundamental quantitative skills that geographers need in scientific explorations. The topics of this course include basic probability distributions, descriptive statistics, hypothesis testing, analysis of variance, regression analysis, and spatial patterns and relationships.

