

# Minnesota State University Moorhead

## POL 310: Political Science Research Methods

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Introduction to empirical research in political science; the nature and role of theory, research design, measurement, and the selection and interpretation of inferential statistics.

### B. COURSE EFFECTIVE DATES: 06/01/1995 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Review of research design issues; unit of analysis, experimental and quasi-experimental design, randomization and sampling.
2. Measurement issues---levels of measurement, validity and reliability
3. Univariate descriptive statistics; measures of central tendency, measures of dispersion, introduction to probability, statistical inference, hypothesis testing.
4. Covariation---relationships and data display.
5. Relations between nominal and ordinal variables---statistical independence, contingency tables and probability, chi-square and hypothesis testing, measures of association, table analysis, the logic of control, patterns of control and interpretation.
6. Relations between ordinal and ratio variables; correlation, bivariate regression, multivariate regression, assumptions of regression modeling, consequences of violations of assumptions, interpretation and application of regression analysis, corrections for homoscedastic errors, logarithmic transformations, time-series implications.

### D. LEARNING OUTCOMES (General)

1. Students shall review and synthesize the concepts of research design, what makes a proper empirical research question, how variables are measured, the assumptions of randomization and design.
2. Students shall understand the uses and interpretation of descriptive statistics in univariate data analysis.
3. Students shall understand the uses and interpretation of measures of relationships between nominal and ordinal variables.
4. Students shall master the basic concepts underlying bivariate and multivariate regression and be able to apply to interpret regression data and understand where regression techniques are appropriate within political science research.

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

## **G. SPECIAL INFORMATION**

None noted