Quantitative Research Methods Comprehensive Exam

READING LIST

UNIVERSITY OF TORONTO,

DEPARTMENT OF SOCIOLOGY

Last update: February, 2019

Area’s Standing Committee, 2018-2019: Blair Wheaton (chair), Andrew Miles, Ethan Fosse.

Other faculty in the area (alphabetical order): Monica Alexander, Irene Boeckmann, Ethan Fosse, Andrew Miles, David Pettinicchio, Markus Schafer, Scott Schieman, Blair Wheaton, Geoffrey Wodtke

REQUIRED READINGS

Total number of reading units (excluding supplemental): 173 units

The reading list includes required readings and supplementary readings. Supplementary readings include references to works that will facilitate further study of a particular topic. Supplementary sections also include related work by faculty in the Department of Sociology at the University of Toronto. Students must read all 173 required reading units plus 12 supplementary reading units selected from any two topics, for a total of 185 reading units. Although there are some exceptions, units typically determined as follows:

- 1 large book > 100 pages = 5 reading units
- Small books and parts of larger books = 2-3 reading units, depending on amount of pages assigned
- 1 journal article or book chapter = 1 reading unit

MODULES

1. Background Readings (12 units)
2. Generalized Linear Models and Related Methods (20 units)
3. Causal Models, Graphical Chains, and Structural Equations (44 units)
4. Multilevel Models and Contextual Effects (30 units)
5. Methods for Longitudinal Data (32 units)
6. Sampling and Inference Issues (20 units)
7. Big Data, Online Data and Sampling (15 units)

1. Background Readings (12 units)


Supplemental Readings:


2. Generalized Linear Models and Related Methods (20 units)

2(a). Linear and Generalized Linear Models (12 units)


2 (b). Interpretation and Presentation of Statistical Models (3 units)


2 (c). Nonparametric Regression (5 units)

Gareth, James, Daniela Witten, Trevor Hastie, and Robert Tibshirani. 2013. An Introduction to Statistical Learning. New York: Springer. (5)

Supplementary Readings


3. Causal Models, Graphical Chains, and Structural Equations (42 units)

3(a). Causal Models (13 units)


### 3(b) Causal Inference (12 units)


### 3(c). Structural Equations with Latent Variables (19 units)


Supplementary Readings


Spirtes, Peter; Richardson, Thomas; Meek, Christopher; Scheines, Richard; Glymour, Clark. 1998. Using Path Diagrams as a Structural Equation Modeling Tool, Sociological Methods and Research, 27(2): 182-225.
4. Multilevel Models and Contextual Effects (30 units)

Baumert (eds.), Modeling Longitudinal and Multilevel Data. Mahwah, NJ: Lawrence Erlbaum. (5)


**Supplemental Readings**


5. Methods for Longitudinal Data (32 units)


Supplemental Readings


6. Sampling and Inference Issues (20 units)

6(a) Sampling and Design Effects (5 units)


6(b) Inference and Model Selection (4 units)


6(c) Other Issues with Inference (11 units)


Supplemental Readings


Marini, Margaret Mooney; Singer, Burton, “Causality in the Social Sciences”.


Sociological Methodology, 1988, 18, 347-409


7. **Big Data, Online Data and Sampling (15 units)**

