האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

ADVANCED APPLEID STATISTICS IN CRIMINOLOGY B - 61880

Last update 21-10-2017

HU Credits: *3*

Degree/Cycle: *2nd degree (Master)*

Responsible Department: *criminology*

Academic year: *2018*

Semester: *2nd Semester*

Teaching Languages: *Hebrew*

Campus: *Mt. Scopus*

Course/Module Coordinator: *Dr. Josh Guetzkow*

Coordinator Email: *joshua.guetzkow@mail.huji.ac.il*

Coordinator Office Hours: *By request, through e-mail*

Teaching Staff:
Dr. Joshua Guetzkow
Mr. Noam Haviv

Course/Module description:
The course presents a review of research designs and/or statistical methods aimed at the identification of causal effects, including propensity score matching, instrumental variables and the use of fixed-effects.

Course/Module aims:
To share knowledge, inspire critical thinking and motivation to conduct externally and internally valid quantitative studies.

Learning outcomes - On successful completion of this module, students should be able to:
Upon its completion, students participating in this course should be able to do the following:
-Search and manage references and bibliographies, written in either English or Hebrew, using EndNote program.
- Distinguish among different types of academic writings based on the research design and type of qualitative or quantitative analysis.
- Evaluate the "quality of evidence" reported in quantitative studies.
- Interpret and evaluate findings reported in systematic reviews and Meta analytic studies.
- Use standardized effect-size estimates in reporting the results of quantitative studies, and distinguish among statistical significance and substantive/clinical importance of measures of association and variance-explained-like measures.
- Evaluate the strengths and weaknesses of observational and experimental designs.
-Construct composite scales and indexes, and assess the measurement validity of latent variables using reliability analysis, exploratory factor analysis, and tests of predictive/concurrent validity.
- Increase the internal validity of conclusions based on statistical analysis of observational data using an elegant method commonly used by economics.

Attendance requirements(%):
100%

Teaching arrangement and method of instruction: A combination of lectures, group discussions, and software applications and interpretations.

Course/Module Content:

Things to be aware of in conducting statistical data analysis(null hypothesis testing, practical versus statistical significance, standardized effect size measures, statistical power, parsimony, and graphic representation of data)

Systematic review and Meta-Analysis: characteristics, interpretation, and available statistical packages.

"Quality of Evidence"? Experimental versus Observational studies in social-science.

Reinforcing internal validity of quasi-experimental designs: propensity score matching and decompositional analysis.

Latent variables: uses and misuses of reliability analysis and exploratory factor analysis.

Required Reading:

Apel, Robert J, and Gary Sweeten. 2010. Propensity score matching in criminology and criminal justice. In Handbook of quantitative criminology: Springer.

Cohen, Jacob. 1990. Things I have learned (so far). American Psychologist 45 (12):1304.

Cohen, Jacob. 1994. The earth is round (p<.05). American Psychologist 49 (12):997.

Fabrigar, Leandre R, Duane T Wegener, Robert C MacCallum, and Erin J Strahan. 1999. Evaluating the use of exploratory factor analysis in psychological research. Psychological methods 4 (3):272.

Farrington, D.P, and B.C. Welsh. 2005. Randomized experiments in criminology: What we have learned in the last two decades. Journal of Experimental Criminology 1:9-38.

Sampson, Robert J. 2010. Gold standard myths: Observations on the experimental turn in quantitative criminology. Journal of Quantitative Criminology 26 (4):489-500.

Streiner, David L. 2003. Starting at the beginning: an introduction to coefficient alpha and internal consistency. Journal of personality assessment 80 (1):99-103.

Weisburd, David. 2010. Justifying the use of non-experimental methods and disqualifying the use of randomized controlled trials: challenging folklore in evaluation research in crime and justice. Journal of Experimental Criminology 6 (2):209-227.

Wilson, D. B. 2001. Meta-analytic methods for criminology. Annals of the American Academy of Political and Social Science 578:71-89.

———. 2009. Missing a critical piece of the pie: Simple document search strategies inadequate for systematic reviews. Journal of Experimental Criminology 5:429-440.

Moyal, Shomron. (2012). Disobedience to law and political violence: Empirical test of an integrative model. Hebrew University of Jerusalem, Institute of Criminology (Theses, Ph.D.) (read chapter 3, entitled: Systematic review and meta-analysis on relative deprivation and normative and counter-normative protest").

Additional Reading Material:

Costello, Anna B, and Jason W Osborne. 2005. Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most From Your Analysis. Practical Assessment Research & Evaluation 10 (7):2.

Crown, William H. 2014. Propensity-Score Matching in Economic Analyses: Comparison with Regression Models, Instrumental Variables, Residual Inclusion, Differences-in-Differences, and Decomposition Methods. Applied health economics and health policy 12 (1):7-18.

Gold, David. 1969. Statistical tests and substantive significance. The American Sociologist:42-46.

Jann, Ben. 2008. The Blinder-Oaxaca decomposition for linear regression models. The Stata Journal 8 (4):453-479.

Nickerson, Raymond S. 2000. Null hypothesis significance testing: a review of an old and continuing controversy. Psychological methods 5 (2):241.

Course/Module evaluation:

End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 100 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:

None