תאריך עדכון: 31/05/2012

שם המרצה: פרופ' מני קוסלובסקי

שם הקורס: שיטות סטטיסטיות מחקריות א'

מספר הקורס: 60-997-01

סוג הקורס: שיעור

שנת לימודים: תשע"ג **סמסטר**: א +ב **היקף שעות**: 2 ש"ש

אתר הקורס באינטרנט: http://hl2.biu.ac.il/

א. מטרות הקורס (מטרות על / מטרות ספציפיות):

The course is a two year course where the emphasis of topics changes from the first to the second year.

The overall purpose of the course is to review with the students some of the major topics in designing a study and analyzing the data that emanates from it.

In the first year, we first discuss some of the overall issues that are relevant for controlled experiments, field studies, Monte Carlo techniques, and observations; special emphasis is placed on factors that affect external and internal validity

In particular, we discuss some of the requirements of planning a study and subsequent data screening issues such size of N, normality, multicollinearity, missing data, outliers. Transformations are presented to solve some of the problems raised in research. Multivariate techniques that they have already been studied in their previous courses are presented and shown how they apply or don't apply to their Ph.D. research projects. In particular, moderator and mediator identification are illustrated.

In the second year, we spend time on the whole issue of null hypothesis testing and criticisms beginning with Jack Cohen's (1994) are discussed. Type 1 error, Type II errors, and Bayes' theorem and its implications for research are delved into. In addition, various research topics that were not presented in previous courses are discussed: Logit analysis, multi-way frequency, discriminate, profile analysis, HLM. The emphasis on these topics varies from year to year depending on student needs.

Each week I try to bring a research problem or ethical dilemma as an example.

Finally, students must hand in each year, in English, a presentation with empirical data on Structural equations modeling and meta-analysis.

ב. תוכן הקורס: (רציונל, נושאים)

מהלך השיעורים: (שיטות ההוראה, שימוש בטכנולוגיה, מרצים אורחים)
הרצאות ותרגילים-

תכנית הוראה מפורטת לכל השיעורים: (רשימה או טבלה כדוגמת המצ"ב)

Week	Topic
1	Informal quiz on research
2-3	Review of some basic inferential statistics
4-5	Research Design issues
6-8	Data Screening-problems and solutions
7-9	Power, Ho (a la Cohen), Bayes, error
10,11	Moderators, mediators, and combinations
12-13	Review of different multivariate techniques including: Logit, Discriminant Analysis, HLM Clustering, Profile analysis

Week	Topic
1-4	Structural Equation modeling (year 1) Meta-analysis (year 2)
5-13	Individual meetings and discussions of each individual or group's project

דרישות:

In English: Power point presentation + Abstract + References or PAPER (approximately 15 pages including tables, references) on a meta-analytic topic- individually or in groups (year 1) or Structural equation modeling (year 2). If in group, the contribution of each one must be identified.

Course is Pass Fail based on the submitted work

Readings: Tabachnick, B. G. & Fidell, L. S. (2006). Using Multivaraite Statistics. New York: Harper Collins.