MEASUREMENT IN HEALTH RESEARCH
SPPH 510 (DRAFT OUTLINE)

Spring, 2013
Lectures: Tuesday 9:00 am to 12:00 pm
Office hours: By appointments

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Course Overview

This course will introduce the students to some aspects of psychometric theory focusing on the development of valid and reliable questionnaires. Classical test theory, generalizability theory, and Item Response Theory (IRT) will be presented in this course. Computer applications are included. The course format will be a combination of lectures, class discussions, computer labs, assignments, and class presentations. PREREQUISITE: Either (a) one of HCEP 400, HCEP 502, HCEP 513 or (b) one of SPPH 400, SPPH 502, SPPH 513 or permission of instructor.

Course Objectives

The objectives of this course are to:
1. become familiar with the concepts underlying measurement theory;
2. be able to conduct an item analysis using classical test theory;
3. become familiar with newer procedures in the area of psychometrics (generalizability theory and item response theory);
4. apply item response theory to conduct an item analysis;
5. learn to evaluate an instrument / questionnaire critically that has been published;
6. understand the relative advantages / disadvantages of classical test theory, generalizability theory, and item response theory; and
7. learn to assess the psychometric properties of a questionnaire.

Readings

Textbooks for the course may be purchased at the UBC Bookstore.


UBC request for article (docdel request)


Software (required)

IBM SPSS Statistics Standard GradPack 19 for Windows/Mac (6-Month Rental). Required for the
analyses can be purchased online at [http://www.onthehub.com/spss/](http://www.onthehub.com/spss/).
Supplemental readings


Other relevant textbooks


Interesting websites

Factor analysis website (R.J. Rummel): [http://www.hawaii.edu/powerkills/UFA.HTM](http://www.hawaii.edu/powerkills/UFA.HTM)

Relevant measurement journals

Applied Measurement in Education
Applied Psychological Measurement
British Journal of Mathematical and Statistical Psychology
Educational and Psychological Measurement
Journal of Educational Measurement
Journal of Educational Statistics
Psychological Assessment
Psychological Bulletin
Psychometrika
Evaluation

1. Assignments given at regular intervals 35%
   Students will need to complete 4 assignments as part of the class. The assignments will generally involve data analysis and interpretation of the results. The student will need to become familiar with SPSS to complete these assignments. Information regarding these assignments will be provided during the semester. Topics to be covered in the assignments: introduction to SPSS (5%), reliability (10%), generalizability (10%), and item analysis using the classical procedure (10%).

2. Mid-term paper 30%

3. Final paper 35%
   The mid-term and final papers will integrate the information learned in class. Students will develop a research plan to assess the validity and reliability of a questionnaire. Details will be provided during the semester.

4. Class participation
   Attendance to the classes are expected.

Important notes
All assignments and final paper must be completed successfully to obtain a passing grade. Late assignments will not be accepted without prior arrangement. Extensions will be considered pending extenuating circumstances and with documented evidence of extenuating circumstances (medical certificates, etc...). Late assignments and papers will be penalized - 10% deduction for each day past the due date. A printed copy of the assignment / paper is due at the beginning of each class, if a printed copy of the assignment/paper is not provided at the beginning of the class it will be considered a day late even if it is submitted later on that day. Assignments and papers are to be printed, unless otherwise instructed.

Plagiarism is a serious academic misconduct at UBC with penalties associated with it. Please refer to the Academic Integrity Resources Centre at UBC to avoid plagiarism.

Class notes available online
http://www.spph.ubc.ca/
Course
Online course link
Select SPPH 510
Sign in using your CWL

Posting assignment/paper questions (email)
All questions related to the assignment/paper should be posted on the Vista website so that all students can see the questions. Questions should not be sent to my UBC email. When assignments are provided on Tuesday, questions will typically be answered around noon on Friday and Monday, unless specified otherwise. Emails will be answered only during UBC
business hours.