CYC 645 Quantitative Research in Child & Youth Care

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Office hours by appointment

Class Location: HSD A264
Time: Tuesday, 9:30 – 12:20

TEXT

Howell, D. *Statistical Methods for Psychology. Wadsworth CENGAGE.*

COURSE DESCRIPTION

The course prepares students to be competent at interpreting quantitative research and provides a foundation for further study of quantitative methods.

COURSE MANAGEMENT

During the first 7 weeks class time will be split between discussion and working on exercises/tutorials. The topics for these seven weeks are described on Course Spaces.

Practice exercises will be sequenced in increasing level of complexity, and there will be exercises to be submitted and also exercises for practice.

Please prepare for each class by reading the assigned material, doing the tutorial, and bringing to class questions about the course reading and the week's topic.

The last 5 weeks of the class will be devoted to individualized projects of your choosing. More detail about these is provided below.

GRADING INFORMATION

Data Analysis Practice Exercises	50%
Presentation	20%
Paper	30%

PRACTICE EXERCISES

Four sets of practice exercises will be provided in the first eight weeks. These are applications of the methods being learned. Please submit your work in Rmarkdown on Course Spaces.

PAPER

The aim of this paper is to demonstrate your competence with the data analysis method of your choice. For most of you it will probably make sense to choose one that has been used in your field of expertise. In this paper you will a) review and critique the use of the design and methods in 3-5 research articles of your choice, and b) reanalyze data from those articles or analyze data obtained for the purpose of this paper. Due April 10.

If you have difficulty selecting a method, you may choose from one of the following:

ANOVA/General LInear Models
Repeated Measures Designs
Multi-Level Modelling
Meta-analysis
Odds Ratios and Logit analysis
Resampling, Bootstrapping and nonparametric tests
Advanced Data Visualization
Supervised Learning

PRESENTATION

On April 3 each of you will give a 15 minute presentation, followed by questions from the class, on the data analysis method that is the topic of your paper.

MISCELLANEOUS INFORMATION

TECHNOLOGY

We are using R, a free and open-source software package, and Rstudio, a software program integrated with R. You will find it helpful to bring your laptop to class so that you can work in class. These programs are also available in most of the computer labs in class.

DUE DATES

Due dates for practice exercises are firm. Late submissions will follow the School's undergraduate policy: for each day past the due date a 5% penalty is applied, and after three days the score goes to zero. The reason for this is to keep a consistent pattern of submission and feedback.