

Course Syllabus

PRT/ESS 6550

Interpreting Research

Fall Semester, 2012

Instructor: Ed Ruddell

Course Location: HPR E-206

Time: Tuesdays 4:35 – 7:05

Office Hours: Mondays and Tuesdays from 2:00 – 4:00 or by appointment. I will also have virtual office hours on Wednesdays, and Thursdays nearly all day.

e-mail: Edward.ruddell@health.utah.edu

Prerequisites: None.

Resources:

Required Textbooks:

Huck, S. (2012). Reading Statistics and Research. 6th ed. Addison Wesley.

Other Readings

Journal articles from research journals in Exercise and Sport Science, Health Promotion, and Parks, Recreation, and Tourism that illustrate key principles addressed in the class.

Electronic Learning

A CANVAS website has been established for this class. The site includes lecture notes, data sets, the course outline, assigned readings, and other resources for the class. It is also where you will post your completed assignments. We will use this a lot for the on-line part of the course.

Course Description

In my field of natural resources recreation we have a subdiscipline called *interpretation*. In his classic book entitled Interpreting Our Heritage, Freeman Tilden defined interpretation as *an educational activity that aims to reveal meanings and relationships through original objects and firsthand experience...* The title of this class, Interpreting Research, aims to do just that. It seeks to be an educational experience that through firsthand experience (reading and critiquing research journal articles) and original objects (the research articles themselves) will give you the skills to read, critique, and inform policy and practice.

Course Format

This course will use a “blended” format. It will be part in-class and part on-line. The first half of our class time will be spent as in-class presentation and discussion. The second half will be lab exercises and reflections. This half will be conducted on-line. This will give you the flexibility to read, perform exercises, and have electronic chats during the remainder of the week.

Learning Outcomes

By the end of the course, you should...

Be able to describe the outline of a research journal article.

Critique the conceptual, literary, and methodological evidence for conclusions presented in research journal articles.

Be able to measure and operationalize variables for research in your discipline.

Be able to recognize and measure variation and covariation within sets of data using spreadsheets, statistical software, and electronic calculators.

Be able to use spreadsheet and statistical software to evaluate distributions of categorical and continuous variables.

Be able to critique research techniques that have special utility in your discipline and critique the analysis of data from those studies.

Be able to analyze relationships between pairs of variables.

Be able to select a probability sample from a defined population.

Be able to write, recognize, and test statistical hypotheses.

Be able to evaluate research designs in terms of internal, external, and statistical conclusion validity.

Be able to evaluate the quality of research measures for evidence of reliability and validity.

Be able to discuss issues in research ethics and identify research that has high potential to produce ethical violations.

Write an article review that could be sent to an Associate Editor of a research journal.

Course Requirements

- Attendance and participation
- Two Examinations
- Quizzes
- Out-of-class exercises
- Article review (this will be the written part of the final exam).

Statement of Equal Access:

The University of Utah, Department of Parks, Recreation, and Tourism seeks to provide equal access to its programs, services, and activities for people with disabilities. If you need accommodations in this class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services, <http://disability.utah.edu> 162 Olpin Union Bldg. 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Code of Student Rights and Responsibilities:

The Code is provided in detail on the University of Utah Web page (<http://www.admin.utah.edu/ppmanual/8/8-10.html>)

Disclaimer

This syllabus has been created as a guide to the class and is as accurate as possible. However, all information is subject to change as class needs change. Any changes will be discussed during class sessions and will be documented in writing.

Course Outline

Scientific World View

Outline of a Research Article

Research Paradigms

Research Problems

Constructs, Variables, and Definitions

Statements of Relation: Propositions and hypotheses

Understanding Variance and Covariance

Research and Probability

Randomness and Sampling

Principles of Analysis and Interpretation

The Logic of Hypothesis Testing and the Standard Error

How to read papers using ANOVA

How to read papers using regression

Measurement

Survey Research

Experimental Research

Writing the Article Review