Counseling Psychology and Special Education 651 - Statistics I
Fall 2015
Section 1, Wednesday 1:30-4:20pm, 112 SWKT

## WHO WE ARE

**Instructors:**

Lane Fischer, PhD; lane_fischer@byu.edu, 340-E MCKB, 801-422-8293
Ken Plummer, PhD; ken_plummer@byu.edu, 3820-A HBLL, 801-422-6187
Zhen Li;  lizhen89101@gmail.com,

*Contact us to set up an appointment.*

## WHERE WE ARE GOING

**Course Purpose:**

By the end of the course you will become fluent in using statistical concepts and procedures that will prepare you to make meaningful contributions in your future practice and scholarly research.

**Course Outcomes:**

This purpose is broken down into the following subcomponents or course outcomes:

You will -
1. explain in your own words the concepts that underlie basic descriptive and inferential statistics for both parametric and non-parametric data sets.
2. explain in your own words hypothesis testing theory and probability distributions.
3. select appropriate statistical methods to answer basic research problems.
4. perform analyses using statistical programs.
5. interpret and report statistical results in APA format.
6. locate research articles and critique the statistical methods used and reported.

## HOW WE WILL KNOW WHEN WE GET THERE

You will complete **two projects** and a **comprehensive final exam**.
- **Project #1** – Locate articles that use key statistical methods taught in the course and show evidence that they used the correct or incorrect method and reported it correctly.  Recommend at least two other designs for each study.  This will be done in class. *(Outcomes 1, 2, 3, 5, 6)*
- **Project #2** – Take your project, thesis, or dissertation topic and create research questions that can be answered by five different statistical methods.  Run the analysis on fictitious data, report the results, and situate the results in the larger context of this topic. This will be done in class. *(Outcomes 4, 5)*
- **Final Exam –** You will be given up to three hours to answer a random selection of five to six questions.  You will select the analysis, run it, and report the results in basic APA format.  You will answer an additional two to three questions that just require you to select the correct statistical method and explain why you chose it.  *(Outcomes 1, 2, 3, 4, 5)*

## HOW WE WILL KNOW WE ARE ON THE RIGHT TRACK

You will -
1. **Complete 14 exercises** that will help you and us monitor your progress toward the course purpose. These will be graded by one of the instructors. *(Outcomes 1, 2, 3, 4, 5)*
2. **Correct the 14 exercises you completed.**  After uploading each assignment, you will be sent an answer key.  Correct your own assignment using the key.  If your answer is wrong explain why it is wrong. These will be graded by one of the instructors. *(Outcomes 1, 2, 3, 4, 5)*

*Decision-Based Learning:*

This course is designed to help you think and perform like an expert.  Because experts do not think like text books or the way traditional courses are taught, an innovative instructional approach will be used in this class called *Decision-Based Learning* that models the expert decision-making process.

*Decision-Based Learning* is a problem or cased-based approach, where you begin with real-world problems and are then taught the decisions experts make to solve them.  At each decision point you will be given "just-in-time, just-enough" instruction that will teach the concepts and theories that inform each decision.  You will practice until you have internalized an expert-decision making framework.  Eventually your goal will be to solve problems without the software using your own internalized-decision model as your guide.

*Decision-Based Learning Software:*

A software called *Decision-Based Learning Software* will be used to guide instruction and learning both during and out of class.

*Your Role:*

You should monitor your own learning constantly identifying gaps in understanding and using the resources of the course (software, textbook, instructors, other students, etc.) to fill those gaps.  Note – just like learning a new language at first it can seem a little tedious but with practice patterns become clear and greater fluency achieved.  You will work in what are called PODs (groups of two or three students) as you complete in-class learning activities.

Schedule – See Learning Suite Schedule.  The schedule has all of the learning materials embedded therein.

*Required Text / Software:*

- Cronk, B.C., (2010). How to Use SPSS Statistics, 7th Edition, Pyrczak Publishing, Glendale. ISBN 1-884585-99-X

- SPSS Statistical Software – this can be accessed in the lab during the week.

Grading Scale

| Grade | Minimum % |
|-------|-----------|
| A     | 93        |
| A-    | 90        |
| B+    | 87        |
| B     | 83        |
| B-    | 80        |
| C+    | 77        |
| C     | 73        |
| C-    | 70        |
| D+    | 67        |
| D     | 63        |
| D-    | 60        |
| E     | < 60      |

**Our Goal!**

| Assessment      | Point Percentage |
|-----------------|------------------|
| 14 Assignments  | 60%              |
| 2 Projects      | 20%              |
| Final Exam      | 20%              |

# UNIVERSITY POLICIES

## Honor Code

In keeping with the principles of the BYU Honor Code, students are expected to be honest in all of their academic work. Academic honesty means, most fundamentally, that any work you present as your own must in fact be your own work and not that of another. Violations of this principle may result in a failing grade in the course and additional disciplinary action by the university. Students are also expected to adhere to the Dress and Grooming Standards. Adherence demonstrates respect for yourself and others and ensures an effective learning and working environment. It is the university's expectation, and every instructor's expectation in class, that each student will abide by all Honor Code standards. Please call the Honor Code Office at 422-2847 if you have questions about those standards.

## Sexual Harassment

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education and pertains to admissions, academic and athletic programs, and university-sponsored activities. Title IX also prohibits sexual harassment of students by university employees, other students, and visitors to campus. If you encounter sexual harassment or gender-based discrimination, please talk to your professor or contact one of the following: the Title IX Coordinator at 801-422-2130; the Honor Code Office at 801-422-2847; the Equal Employment Office at 801-422-5895; or Ethics Point at http://www.ethicspoint.com, or 1-888-238-1062 FREE (24-hours).

## Student Disability

Brigham Young University is committed to providing a working and learning atmosphere that reasonably accommodates qualified persons with disabilities. If you have any disability which may impair your ability to complete this course successfully, please contact the University Accessibility Center (UAC), 2170 WSC or 422-2767. Reasonable academic accommodations are reviewed for all students who have qualified, documented disabilities. The UAC can also assess students for learning, attention, and emotional concerns. Services are coordinated with the student and instructor by the UAC. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures by contacting the Equal Employment Office at 422-5895, D-285 ASB.