

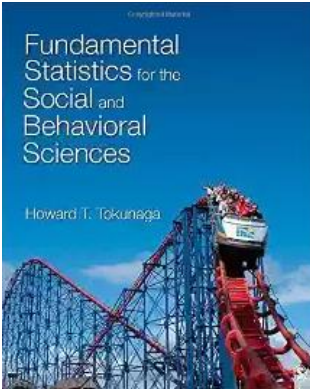
Central Christian College of Kansas

Code: SS-PY 310
Title: Research Methods & Applied Statistics
Credits: 3
Prerequisites: NS-MA 209

Description: Designed to introduce students to the use of statistical models and formulas used in research methodology and design. This research process will be investigated by actively involving the student in developing research questions, hypotheses development, evaluating ethical issues, collecting and analyzing data, and reporting research results. Statistical topics will include a hands-on approach to correlations, ANOVA, t-tests, regression, probability, standard deviation, central tendency, evaluation of curves, as well as other topics. Use of EXCEL and SPSS is required.

Upon successfully completing this course, students will be able to:

- Effectively sort through conflicting claims often found in research literature
- Define the variables that researchers utilize or are planning to study
- Identify and characterize ethical considerations in research
- Identify suitable ideas for additional research
- Describe how methods of sampling and sampling size affects results
- Explain how reliability and validity are critical to research methods
- Differentiate between true experiments, pre-experiments, and quasi-experiments
- Summarize the differences between the two major branches of statistics
- Expound on the value of both quantitative and qualitative research methods including sampling and measurements
- Skillfully report on published research using a solid understanding of basic methods of research



Tokunaga, H. (2016). *Fundamental Statistics for the Social and Behavioral Sciences*. Thousand Oaks, CA: Sage Publications, Inc.

- ISBN-10: 1483318796
- ISBN-13: 978-1-4833-1879-0

In addition to the course text, the student version of SPSS is also required for this class.

Topic	Readings	Assignments
Introduction to Research Methods	<i>Fundamental Statistics</i> <ul style="list-style-type: none"> • Chapter 1 - Introduction to Statistics 	<ul style="list-style-type: none"> • Pre-Test • Plagiarism Certification • Discuss • Discuss 2 • Apply
Topic	Readings	Assignments
Reviewing Literature and Sampling	<i>Fundamental Statistics</i> <ul style="list-style-type: none"> • Chapter 7 - Testing One Sample Mean 	<ul style="list-style-type: none"> • Discuss • Discuss 2 • Apply
Topic	Readings	Assignments
Understanding Statistics	<i>Fundamental Statistics</i> <ul style="list-style-type: none"> • Chapter 10 - Errors in Hypothesis Testing, Statistical Power, and Effect Size 	<ul style="list-style-type: none"> • Discuss • Discuss 2 • Apply
Topic	Readings	Assignments
Instrumentation and Preparing Research Reports	<i>Fundamental Statistics</i> <ul style="list-style-type: none"> • Chapter 12 - Two-Way Analysis of Variance (ANOVA) 	<ul style="list-style-type: none"> • Discuss • Discuss 2 • Apply

Topic	Readings	Assignments
Qualitative Research	<i>Fundamental Statistics</i> <ul style="list-style-type: none"> Chapter 13 - Correlation and Linear Regression 	<ul style="list-style-type: none"> Discuss Discuss 2 Apply
Topic	Readings	Assignments
Research Literature Review	<i>Fundamental Statistics</i> <ul style="list-style-type: none"> Chapter 14 - Chi-Square 	<ul style="list-style-type: none"> Discuss Discuss 2 Final Paper Post-Test

Assessments Number Points Each Total

Discussion	12	25	300
Apply Assignments	5	100	500
Pre-test	1	5	5
Post-test	1	5	5
Final Paper	1	190	190
Total			1000

Students are expected to post in the discussion board a minimum of three separate posts and three separate post dates per discussion thread. The three posts for each thread must include:

- One "initial" post in response to the instructor's question (or stated assignment) no later than Thursday of each course week.
- Two "follow up" post in response to at least one classmate by Sunday of each course week.

The initial response to a discussion question should substantively demonstrate familiarity with the content of the question. The response should be 150-200 words in length. To ensure the discussion is a collective and focused exploration of the topic in the question, the discussion thread should remain focused on the question.

The timing of responses is important since other students are dependent on your postings in order to fully develop the discussion and to post "follow up" discussion entries. Responses should occur in the week the discussion question is posted for reply. Preparation for the response is encouraged to ensure a thoughtful and well-founded contribution to the discussion.

Each learner is expected to both respond initially (by Thursday each week) to the discussion question or assignment instruction posted by the instructor/facilitator each week and make at least two follow-up responses to other learners' postings in the discussion thread by the end of the week (Sunday at 11:59pm). The purpose is to ensure an informed and thoughtful dialogue focused on the topic.

Initial Response (Standard Posting Requirements)

0 Points	1-2 Points	3-4 Points	5 Points
No initial response posted.	Initial response is superficial (less than 100 words), and/or posted after Thursday at 11:59 p.m. CT.	A substantive initial response is posted prior to Thursday at 11:59 p.m. CT that contains 100-149 words.	A substantive initial response is posted prior to Thursday at 11:59 p.m. CT that includes at least 1 reference to course material or another reliable source (150 words or more).

Initial Response (Quality of Content)

0 Points	1-2 Points	3-4 Points	5 Points
Response is irrelevant to the question and does not add to the intent of the discussion.	Response addresses the question, but lacks depth or goes off topic.	Response addresses the question, though greater reflection or development of thought would be helpful.	Response addresses the question, is reflective, and represents a substantive contribution to the discussion.

Follow-Up Posts

0 Points	1-2 Points	3-4 Points	5 Points
No follow-up posts made.	Follow-up posts do not provide sufficient analysis or synthesis of the discussion.	Follow-up posts demonstrate an appreciation for the input of others and add to the discussion.	Follow-up posts elaborate on the comments of others and add to the discussion with further analysis and synthesis.

Mechanics

0 Points	1-2 Points	3-4 Points	5 Points
Posts lack any organization and/or contain multiple errors in spelling or mechanics.	Posts are somewhat organized, but interrupted by significant errors in spelling and mechanics.	Posts could benefit by a bit more organization and attention to mechanical details.	Posts are clear and formatted in a way that is easy to read, free from spelling and mechanical errors.

Frequency of Participation

0 Points	1-2 Points	3-4 Points	5 Points
No participation in discussion.	All posts made on the same day.	Posts made on 2 different days.	Posts made on 3 (or more) different days.

Apply

There are 5 application assignments in this course - one each in weeks 1-5. These are designed so you apply the knowledge and skills you learn during the week.

Introduction

Absent	Needs Improvement	Proficient
There is no introduction to the paper. (0 points)	There is an introduction, but it does not introduce the topic, its importance, and/or alert readers to the structure of the discussion of your ideas. (1-6 points)	There is an introduction that introduces the topic, its importance, and it alerts readers to the structure of the discussion of your ideas. (7 points)

Body (Use of Course Terms and Concepts)

Absent	Needs Improvement	Proficient
No course terms and concepts were used. (0 points)	Some of the course terms and concepts were used inappropriately or key terms and concepts were missing from the discussion. (1-49 points)	All of the relevant course terms and concepts were present and used appropriately in the discussion. (50 points)

Conclusion

Absent	Needs Improvement	Proficient
There is no conclusion to the paper. (0 points).	There is a conclusion, but it does not synthesize the main ideas of the paper, and/or provides implications for research and/or practice. (1-7 points)	There is a conclusion that synthesizes the main ideas of the paper, and/or provides implications for research and/or practice. (8 points)

Writing Mechanics (e.g. Spelling, Grammar, etc.)

Absent	Needs Improvement	Proficient
The paper had severe problems with spelling, grammar, etc. errors. (0 points)	The paper had some spelling, grammar, etc. errors. (1-14 points).	The paper had very minimal spelling, grammar, etc. errors. (15 points).

Format (e.g., length, font size, margins, in-text citations and reference list in APA style)

Absent	Needs Improvement	Proficient
The paper did not meet the minimum format requirements. (0 points)	The paper met some of the format requirements. (1-19 points)	The paper met all format requirements. (20 points)

Pre/Post-Tests

There is a pre and a post-test in this course. The pre-test is scheduled for the first week of classes. The post test is scheduled for the last week of classes. While the actual score for both the pre and the post-test do not get configured into your grade, you will earn 5 participation points for the submission of each. The pre and post-tests should be taken seriously as they provide important feedback on your learning outcomes. This information is used to continuously improve the course.

Final Paper

Your final submission for this course will be a 4-6 page paper.

Additional details can be found within the "Final Paper" content item within the "Week 6" unit.

Format Requirements

Document Type	MS Word
Paper Size	8.5 X 11"
Length	4-6 pages
Margins	1"
Font	Times or Times New Roman, 12 pt.
Line Spacing	Double. No extra double space between paragraphs please.
In-text Citations & Reference List Style	APA
Paper Structure	<ul style="list-style-type: none"> • Cover Page • Introduction • Body • Conclusion • References
File Naming Convention	LastName_FirstName_Final_Paper Example: Doe_John_Final_Paper

Ratings

Criteria	Absent	Needs Improvement	Proficient
Introduction	There is no introduction to the paper. (0 points)	There is an introduction, but it does not introduce the topic, its importance, and/or alert readers to the structure of the discussion of your ideas. (1-19 points)	There is an introduction that introduces the topic, its importance, and it alerts readers to the structure of the discussion of your ideas. (20 points)
Body (Use of Course Terms and Concepts)	No course terms and concepts were used. (0 points)	Some of the course terms and concepts were used inappropriately or key terms and concepts were	All of the relevant course terms and concepts

		missing from the discussion. (1-94 points)	were present and used appropriately in the discussion. (95 points)
Conclusion	There is no conclusion to the paper. (0 points)	There is a conclusion, but it does not synthesize the main ideas of the paper, and/or provides implications for research and/or practice. (1-19 points)	There is a conclusion that synthesizes the main ideas of the paper, and/or provides implications for research and/or practice. (20 points)
Writing Mechanics (e.g. Spelling, Grammar, etc.)	The paper had 10 or more spelling, grammar, etc. errors. (0 points)	The paper had 5-10 spelling, grammar, etc. errors. (1-24 points)	The paper had very minimal spelling, grammar, etc. errors. (25 points)
Format (e.g., length, font size, margins, in-text citations and reference list in APA style)	The paper did not meet the minimum format requirements and/or no APA citation. (0 points)	The paper met some of the format requirements and/or the student needs to review proper APA citation. (1-29 points)	[The paper met all format requirements and APA requirement. (30 points)