



MASTER COURSE OUTLINE

A. PSYC 2250 Statistics for Behavioral Sciences

B. COURSE DESCRIPTION:

This course introduces basic statistical terminology as well as the principles of statistical measurement associated with behavioral science research methods. Emphases will be placed on appropriate application and interpretation of statistical measures such as: measures of central tendency and variability, probability and distributions, correlation and regression, hypothesis testing, t-tests, analysis of variance, and chi-square tests. Students will also use the statistical software SPSS or another statistical package to independently analyze laboratory data from course assignments. Prerequisites: PSYC 1105 General Psychology with a grade of 'C' or higher and MATH 2021 Fundamentals of Statistics with a grade of 'C' or higher. College-level reading skills are critical.

(MnTC Goal 5/SS and Goal 2/CT; 4 Cr – 3 lect, 1 lab)

C. *MnTC Discipline: History and the Social and Behavioral Sciences

**Core Theme: Critical Thinking

D. RIVERLAND INSTITUTIONAL LEARNING OUTCOMES:

This course addresses the following Riverland Institutional Learning Outcome(s):

- ☒ ILO 1: critical thinking (*Core Theme Goal 2*)
- ☐ ILO 2: awareness of the larger global community (*Core Theme Goal 7 or 8*)
- ☐ ILO 3: ethical, engaged citizenship (*Core Theme Goal 9 or Goal 10*)
- ☐ ILO 4: communication and collaboration (*Discipline Goal 1 and by any learning outcome(s) involving communication or collaboration*)

E. MAJOR CONTENT AREAS:

- Introduction to research design
- Choosing appropriate statistics
- Tables and graphs
- Statistical significance (effect size, confidence intervals and statistical power)
- Central tendency and variability
- Inferential statistics (Z scores, the normal curve, population vs. sample and probability)
- The t-test (one and two samples)
- Analysis of variance
- Correlation
- Regression
- Chi-square tests

- Using SPSS or another statistical package
- Reporting results using the APA format

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

<u>GOAL TYPE</u>	<u>OBJECTIVES</u> Students will be able to	<u>OUTCOMES</u> The student will successfully
<u>MnTC 5a</u>	employ the methods and data that historians and social and behavioral scientists use to investigate the human condition.	1. demonstrate an understanding of the mathematics and logic behind selecting and applying statistical procedures appropriate for a given hypothesis, scale of measurement, and experimental design.
<u>MnTC 5c</u>	use and critique alternative explanatory systems or theories.	1. read, accurately interpret, and summarize basic statistical conclusions from behavioral science sources.
<u>MnTC 5d</u>	develop and communicate alternative explanations or solutions for contemporary social issues.	1. critically evaluate statistical presentations and conclusions from behavioral science sources.
<u>MnTC 2a</u>	gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive and conscious of possible bias in the information selected.	1. perform and describe the following statistical procedures commonly used by social scientists including their respective advantages and disadvantages: creating visual display of data, measure of central tendency, variability and frequency distribution, correlational analyses, regression analyses, inferential statistical procedures and nonparametric tests.
MnTC 2c	analyze the logical connections among the facts, goals and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.	1. interpret statistical findings and graphs in the context of their level of statistical significance, confidence intervals, effect sizes, and underlying assumptions and explain these findings using the common language and conventions of the American Psychological Association.
MnTC 2d	recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses and evaluations made by ourselves and others.	1. critically evaluate own values, biases and conclusions concerning statistical information and conclusions from behavioral science sources.
CS	use statistical software to analyze laboratory data from the behavioral sciences.	1. use SPSS or another statistical package to build data sets, run univariate analyses, and interpret and display results.

G. SPECIAL INFORMATION:

This course requires the use of the Internet, the submission of electronically prepared documents, the use of a course management software program and the use of the statistical program SPSS or another statistical package. There will be a fee charged for the use of the required SPSS statistical package or another statistical package. Students who have a disability and need accommodations should contact Accessibility Services at the beginning

of the semester. This information will be made available in alternative format, such as Braille, large print, or current media, upon request.

H. COURSE CODING INFORMATION: Course Code D/Class Maximum 30 ; Letter Grade

Revision date: 04/04/17; 04/19/22; 10/03/22

AASC Approval date: 05/02/17; 12/17/19; 05/03/22; 11/15/22

*Riverland Community College Disciplines	MnTC Goal Number
Communication (CM)	1
Natural Sciences (NS)	3
Mathematics/Logical Reasoning (MA)	4
History and the Social & Behavioral Sciences (SS)	5
Humanities and Fine Arts (HU)	6

**Riverland Community College Core Themes	MnTC Goal Number
Critical Thinking (CT)	2
Human Diversity (HD)	7
Global Perspective (GP)	8
Ethical and Civic Responsibility (EC)	9
People and the Environment (PE)	10

*These five MnTC Goals have been identified as Riverland Community College Disciplines.

** These five MnTC Goals have been identified as Riverland Community College Core Themes.

NOTE: The Minnesota Transfer Curriculum “10 Goal Areas of Emphasis” are reflected in the five required discipline areas and five core themes noted in the Riverland Community College program of study guide and/or college catalog.