**Passaic County Community College**

**Academic Year: \_2020-2021\_**

**Master Syllabus**

**Department Chair: Ed Mosley**

**Program Coordinator: Lonna Murphy**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Course Code:**PS 394      **Course Title:** Statistics for the Behavioral Sciences

**Department:** Humanities

**Course Description:** This course is an introduction to statistics with examples from the behavioral sciences, especially psychology. It will cover techniques for describing observations, including frequency distributions, stem plots, graphs, averages, measures of variability, and coefficients of correlation; and techniques for drawing inferences from observations, including correlation, hypothesis testing, and confidence intervals.

**Prerequisites:** MA 103

**Credits:  4                          Lecture Hours: 4                Lab/Studio Hours: 0                Clinical/Fieldwork Hours:** **0**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Required Textbook/Materials**:

**Texts:** Gravetter, F.J., & Wallnau, L. (2017). *Statistics for the Behavioral Sciences* (10th ed*.).* Cengage

Calculator (but not a graphing calculator), but you will not be allowed to use one during quizzes/exams

**Additional Time and Supplemental Requirements:**

For every one minute of weekly instructional time, students are expected to complete two minutes of assigned work outside of class. For this class 6 hours of additional time are expected.

**COVID-19:**

On-Campus Requirements during COVID-19*:* Passaic County Community College has created a thorough plan for maintaining a healthy environment while on campus during the COVID-19 Pandemic.  You are required to wear your mask, maintain safe social distances and wash your hands frequently.  Also, remember to use hand sanitizer stations, and do not gather in groups.  Maintaining a healthy campus will require all of us to do our part.  If we take these simple precautions, we can have a safe and productive semester.

**Course Learning Outcomes**:

Upon completion of this course, students will be able to:

|  |
| --- |
| * demonstrate an understanding of the goals of both descriptive and inferential statistics, and be able to determine under what circumstances the use of each is most appropriate. |
| * recognize and appropriately use the basic terminology and notation used in statistics, noting the differences between populations and samples, as well as the different types of notation used to describe characteristics of population and sample data. |
| * adequately describe a set of data, which involves creating appropriate tables and/or frequency graphs as well as calculating (by hand and using SPSS) appropriate measures of central tendency and variability |
| * use, and calculate, both z-scores and percentile ranks as measures of a score’s relative position in a data set |
| * understand the standard unit normal distribution and be able to find probability of obtaining various scores if given a specific normal distribution |
| * differentiate between parametric inferential statistics and non-parametric inferential statistics and determine under which circumstances each is most appropriate |
| * describe the Central Limit Theorem and how it forms the basis of all parametric inferential statistics |
| * determine when to appropriately use the following inferential tests and then conduct, by hand, and the interpret the relevant hypothesis test: z-test, one sample t-test, independent samples t-test, related samples t-test, one-way between-subjects ANOVA |
| * explain what a “main effect” and an “interaction” is when presented with a two-factor ANOVA |
| * calculate and appropriately interpret confidence intervals, as well as be able to discuss when confidence intervals are preferred over hypothesis testing |
| * understand the concept of correlation and regression and be able to correctly calculate by hand and using SPSS, as well as correctly interpret, correlations and regression analyses if given a set of data |
| * use APA style, at a beginner level, to report descriptive and inferential statistics in short paragraph and to create APA style graphs and tables. |

**General Education Outcomes:** Not a general education course

**Grading Standards:**

|  |  |  |
| --- | --- | --- |
|  | **Criteria** | **Grade** |
|  | Quizzes | 20% |
|  | Exams (2) | 40% |
|  | Final Exam | 25% |
|  | Group Research Project | 15% |
|  |  | **100 %** |

**Course Content**:

(Schedule and suggested topics, readings, and assignments subject to change based on instructor and instructional resource)

Introduction to Statistics and the Scientific Method

Indicators of Relative Standing: Frequency Distributions & Percentiles

Characteristics of Distributions: Central Tendency

Characteristics of Distributions: Variability

Indicators of Relative Standing: z-scores

Probability and the Normal Distribution

Sampling Distributions

Intro to Hypothesis Testing

One-sample t-test

Independent samples t-test

Repeated-measures t-test

Analysis of Variance

Two-factor ANOVA (independent measures)

Correlation

Regression

**Department Policies:**

**College Policies:**

For Information regarding:

* PCCC’s Academic Integrity Code
* Student Conduct Code
* Student Grade Appeal Process

Please refer to the PCCC Student Handbook and PCCC Catalog

**Panther Alert:**

The College will announce delayed openings, closings, and other emergency situations through the Panther Alert System. Students are encouraged to sign up for Panther Alert Notifications by logging into their student accounts through the PCCC website at [www.pccc.edu](http://www.pccc.edu) and following Panther Alert System instructions.

**Notification for Students with Learnings Disabilities:**

If you have a disability, and believe you need accommodations in this class, please contact the Office of Disabilities Services (ODS) at 973-684-6395, or email [ods@pccc.edu](mailto:ods@pccc.edu). You should do so as soon as possible at the start of each semester. If you require testing accommodations, you must remind me (the instructor) one week in advance of each test.

Date last modified: December 2020