MAT340: Statistics for Behavioral Science (NA)
Spring 2022
Fridays 11:10 AM to 2:05 PM EDDT

COURSE INSTRUCTOR: Ashanti Dawson
CONTACT INFORMATION: Email: ashanti.dawson@nyack.edu
                                    Email: ashantidawson@gmail.com

APPOINTMENT INFORMATION: Open Office Hours: *By Appointment*

REQUIRED TEXTS: Introductory Statistics (Loose-leaf) Edition: 9th Author: Mann; WILEY ISBN: 9781119148326

CATALOG COURSE DESCRIPTION This course introduces statistical methods as applied to the social sciences from an experimental approach. Topics include frequency tables, graphs, measures of central tendency and variability, Z-score, normal distributions, and logic of hypothesis testing. A central focus is the conceptualization, computation, and interpretation of independent measures t-tests, dependent measures t-tests, ANOVA, and correlational analyses using the statistical package for the social sciences (SPSS)
Prerequisite: PSY110.

SPSS: This course requires the use of the Statistical Package for Social Science (SPSS). A number of methods to gain access to this program will be discussed during the first class meeting. Generally, I suggest students to purchase the SPSS via this link:
https://studentdiscounts.com/ibmspssstatisticsgradpack25basedownload-winmac-6mnth.aspx

Calculator: All students are required to bring a calculator to each and every class. A basic calculator (with a percentage and square root key) is all that is needed. **Note:** Because cell phones may have technology that compromises academic integrity, no cell phone calculators may be used AT ANY TIME.

STUDENT LEARNING GOALS:	Assignment* Measuring Goal Attainment:	Other Alignments	
		Core / Skill	Dept / Prg
1. Strengthen and build skills necessary for success in college level math courses.	Homework and exams		
2. Develop problem interpretation and problem solving skills.	Homework and exams		
3. Learn tools and techniques for taking notes, studying, and preparing for exams.	Learning tools and techniques for taking notes, studying, and preparing for exams.		
4. Become more confident in his/her mathematical ability	Become more confident in his/her mathematical ability		

The above student learning goals are aligned with the institutional core academic goals and skills and the department's and/or program's goals stated in the college catalog (https://www.nyack.edu/site/nyack-catalog/). Attainment of goals is evaluated by the identified assignments.

*Assessments primarily serve as measures of individual student growth and goal attainment. Secondarily, samples of student work and/or evaluations of student work may be used by the School/Department and Institution for improving student learning and as evidence of program effectiveness. Care will be taken to protect student identity.

GRADING COMPOSITION AND SCALE:

Course Requirements: Your grade in this course will be determined as follows:

1. Handwritten Homework	10%
2. Class Preparation and Participation	10%.
3. Wiley eTextbook Assignments	10%.
4. Three Exams	60%.
5. Final Exam (Optional)	10%.
Total	**100% / 100%**.

As outlined in the catalog, all grades are calculated based on the following scale of Letter Grade/Percentile Equivalents:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
93-100%	90-92%	88-89%	83-87%	80-82%	78-79%	73-77%	70-72%	68-69%	63-67%	60-62%	0-59%

Care should be taken to perform at one's best in each class. Minimum course, program, and institution grade requirements are outlined in the college catalog (https://www.nyack.edu/site/nyack-catalog/), falling below which may affect timely degree completion and/or financial assistance.

CARNEGIE UNIT ACCOUNTABILITY
In order to demonstrate accountability to reach the student learning goals listed above, this course holds to a professional academic standard known as the Carnegie Unit. This impacts the amounts of reading, "seat time" (instructional schedule set by the Registrar's Office), and outside work assigned. Standardized expectations are 15 hours of class and 30 hours of homework per credit **(45 hours of class time and 90 hours of homework for a 3-credit course)**. Accreditors and the US Department of Education have set these standards so as to assure that students receive a fair education.

COURSE OUTLINE
All dates and times are listed in Eastern Standard Time (EDT).

In addition to class time, the estimated homework hours for this course, by category, are as follows:

Type of Work	Hours
Homework Assignments- 3 hours per week	36
Chapter Reading and or review of class notes – 1 hour per week	12
Tutoring on weak areas – 1 hour per week	12
Preparation for Midterm and Final Exam – 6 hours	12
Total Homework Hours	**72**

Section   Topic Description

Chapter 1   Introduction

1.1   Statistics and Types of Statistics

1.2   Basic Terms

1.3   Types of Variables

1.5   Population Versus Sample

Chapter 2   Organizing Data

2.1   Organizing and Graphing Qualitative Data
2.2   Organizing and Graphing Quantitative Data

Chapter 3   Numerical Descriptive Measures

3.1   Measures of Central Tendency for Ungrouped Data
3.2   Measures of Dispersion for Ungrouped Data

3.3   Mean, Variance, and Standard Deviation for Grouped Data

3.4   Use of Standard Deviation

3.5   Measures of Position

TBA   Exam#1-Chapters 1-3

Chapter 4   Probability

4.1   Experiment, Outcome, and Sample Space

4.2   Calculating Probability

4.3   Marginal Probability, Conditional Probability, & Related Probability Concepts

4.4   Intersection of Events & Multiplication Rule

4.5   Union of Events & Addition Rule

4.6   Counting Rule, Factorials, Combinations, & Permutations

Chapter 5   Discrete Random Variables and Their Probability Distributions

5.1   Random Variables
5.2   Probability Distribution of a Discrete Random Variable

5.3   Mean and Standard Deviation of a Discrete Random Variable

Chapter 6   Continuous Random Variables and the Normal Distribution

6.1   Continuous Probability Distribution and the Normal Probability

              Distribution

6.2   Standardizing a Normal Distribution

6.3   Applications of the Normal Distribution

6.4   Determining the z and x Values When an Area Under the Normal

               Distribution Curve is Known

TBA   Exam#2-Chapters 4-6

Chapter 7   Sampling Distributions

7.1   Sampling Distributions, Sampling Errors and Nonsampling Errors

7.2   Mean and Standard Deviation of $\overline{x}$

COURSE POLICIES

- **Reasonable Accommodation:** Any student eligible for and requesting academic accommodations due to a disability is required to provide a letter of accommodation from the Office of Disabilities Support Services within the first six weeks of the beginning of classes.
- **Student Identity Verification and Privacy:** Student identity in the online course companion is verified via measures for online course enrollment (student name, matching institutional email address, and student ID#) and online course login (secure login and pass code via my.nyack.edu portal). Use of the Edvance360 Software and System is implemented and maintained in compliance with the Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. § 1232g; 34 CFR Part 99, and assurances are provided that information protected by FERPA is secure from people unauthorized to use the System.
- **Attendance/Absence:** Attendance is marked in the Faculty Portal each class period. Missing any class time is detrimental to students and should be avoided. Students, however, are permitted one hour of absence (excused or unexcused) for each credit hour before grading penalties are imposed. **More than this amount (2+) will result in the reduction of the final grade by one full grade. Students are always responsible for any and all subject material or directions given during their absences from class.** A student must contact the professor via email or voice mail before the end of a missed class. All assignments are due on the date designated. If the professor is absent, work equivalent to the "seat time" missed will be posted in the E360 course companion in order to mark attendance and to fulfill federal/state regulations.
- **Late Assignments/Extensions:** . **LATE HOMEWORK WILL BE PENALIZED BY 10% per day late.** Assignments cannot be handed in past the last day of the class, unless an extension request was approved by the professor and filed with the Registrar's Office no later than the last day of the class (before final exams week begins—*see Extensions for Late Work policy in the college catalog*).
- **Make-Up Exams:** Students may not be absent from an announced examination period except for reasons beyond their control. In the event of an unavoidable absence, the student must arrange for a make-up examination with the instructor.
- **Academic Integrity and Plagiarism:** In a Christian college academic integrity is particularly important. Any student caught cheating or plagiarizing (the unacknowledged use of other people's words or ideas as though they were your own) will be subject to the penalties as *described in the plagiarism policy in the college catalog and student handbook*.
- **Academic Quality:** Remember that grades for assignments are based not only on the completion of the assignment but the **quality** of work produced. The higher the **quality** of skills and abilities demonstrated, in areas such as expression and depth of thought, organization, writing, research, reporting, and observation, the higher the grade given to the assignment. All written assignments will be completed using the indicated style guide.
- **Style Guide for written work:** For all homework, students do not need to follow any strict style guide, although they are recommended.
- **Communication with Instructor:** Nyack College email will be the primary mode of communication with students, unless specified otherwise. Please check your email regularly.
- **Grievance Procedure Policy:** Students who have a grievance relative to academic policies, grades given, or other academic judgments should first seek to resolve their complaints with the professor. If resolution is not reached, the matter may be directed to the department head or program director of the class in question. If this does not solve the problem, a formal complaint may be made in writing to the respective Academic Dean whose judgment is final. *See the full Grievance Procedure Policy posted in* the college catalog.
- **Discrimination (Title IX):** Sex and gender discrimination, including sexual harassment, are prohibited in educational programs and activities, including classes. Title IX legislation and College policy require the College to provide sex and gender equity in all areas of campus life. If you or someone you know has

experienced sex or gender discrimination, sexual harassment, sexual assault, intimate partner violence, or stalking, we encourage you to seek assistance and to report the incident through resources available at www.nyack.edu/safetyandsecurity. Confidential assistance is available at the Student Counseling Center. Faculty are NOT confidential under Title IX and will need to share reported information with the Title IX Coordinator. For these and other policies governing campus life, please see the Student Handbook.

- **Electronic Devices:** It is expected that ALL electronic devices be MUTED during class time. Do not answer phone calls or text messages during class.
- **Withdrawal Date:** Withdrawal from a course is allowed until the class reaches the 75% mark of the course length **(4/9/2021)**. Withdrawal requires signatures on the Registrar's Course Withdrawal form and the process should be started well before the deadline. Financial implications and satisfactory academic progress implications provided by the financial aid counselor and the academic advisor should be considered during the Course Withdrawal form process.

STUDENT LEARNING GOALS FOR THE DEPARTMENT OF PSYCHOLOGY

Goal 1: Students will identify major concepts, theoretical perspectives, empirical findings, and historical trends in psychology. To achieve this goal, students will be able to:

1.1 Identify the primary objectives of psychology: describing, understanding, predicting, and controlling behavior and mental processes.

1.2 Identify the major content areas of psychology: biological, cognitive, developmental, learning, personality, psychopathology, and social.

1.3 Identify the major theoretical perspectives in psychology: behavioral, psychodynamic, trait, humanistic and cognitive.

Goal 2: Students will apply basic research methods in psychology. To achieve this goal, students will be able to:

2.1 Participate in a process of designing and conducting a study using an appropriate research method, and write a research report in APA-style format.

2.2 Write a literature review in APA-style format.

Goal 3: Students will use critical thinking skills. To achieve this goal, students will be able to:

3.1 Evaluate the quality of information, including differentiating empirical evidence from speculation.

3.2 Use scientific principles and evidence to resolve conflicting claims.

3.3 Evaluate claims that arise from untested or unverified assumptions.

3.4 Demonstrate the ability to integrate psychological principles and research with a Christian worldview.

SELECTED BIBLIOGRAPHY AND WEB RESOURCES

Salkind, N. (2017). *Statistics for people who (think they) hate statistics*. (6th ed.). Thousand Oaks, CA.: Sage. 978-

1-5063-3383-0.

Salkind, N. (2019). *Statistics for people who (think they) hate statistics*. (7th ed.). Thousand Oaks, CA.: Sage. 978-

   1544381855.

Cumming Geoff (2012). *Understanding the new Statistics*. New York, NY: Routledge. 978-0-415-87968-2