



QUANTITATIVE METHODS AND STATISTICS FOR EVALUATORS

Instructor: Nicole Gilbert Cote

E-mail: ngilbertcote@clarku.edu

Virtual office hours: Thursday evenings from 8:30-9:30 pm EST

I am available through email any time and by appointment as necessary. You can usually expect a response to emails within 12 hours.

Have you ever heard the phrase, “The numbers speak for themselves?” You’ll soon learn this isn’t entirely true. Numbers must be interpreted, which is one goal of statistics. Throughout the semester you’ll learn various statistical tools and techniques that will help you organize, describe, and make inferences about data. You’ll also learn about quantitative research and evaluation methods.

Course Objectives

Students will:

- perform common quantitative methods and statistical techniques that are relevant to conducting an evaluation,
- differentiate between the concepts of evaluation and research, and
- apply their learning to the development of a quantitative evaluation project.

Course Overview

Research and evaluation (or Program Monitoring and Evaluation, M&E) spans a wide range of conceptualizations and definitions. Evaluators utilize numerous research methods and ways of thinking about and applying research, as they design and conduct evaluations.

Research methods can be either quantitative, qualitative, or a mix of both (i.e. mixed-methods). Similarly, evaluation can be quantitative, qualitative, or mixed, and evaluations draw on these very same research methods and methodologies but they are often used by evaluators somewhat differently than researchers.

What is important is that the methods and design that evaluators choose need to be relevant and appropriate to the specific program that is being evaluated and these methods need to be understood and used with the same level of insight, understanding, and rigor that formal academic researchers might use when conducting their own academic research.

Course Commitment

Courses at Clark require commitment, engagement and reflection, and online courses at Clark are no different.

Online courses often require more reading and writing than many face-to-face courses. Students sometimes underestimate the work that online courses require, so be advised that while you will work hard, it will also be incredibly rewarding!

Course Text

The text for this course is *Fundamental Statistics for the Social and Behavioral Sciences* by Howard T. Tokunaga, published in 2016 (edition 1) and 2019 (edition 2). Either edition is fine. Copies are available through most major online book retailers. You will be expected to have a copy of the text by the second week of the semester. Any additional readings will be free and posted on our Moodle site.

Course Details

This section will give you an idea of what you are expected to do and what you can expect from me. It is followed by information about how each of these course components will contribute to your final grade.

Discussions & Reflections

A weekly discussion or reflection will provide an opportunity for you to think critically about the course material in a focused and deliberate way. Specifically, you will be asked to answer questions that I pose as part of a class discussion or in a 1-2 page reflection paper. Select reflections may be shared with the class. Discussion and reflection deadlines will be posted on Moodle.

Quizzes

There will be several short, timed quizzes covering the material from the chapters, lectures, and other important information from the course (e.g., supplemental readings, videos). You may use your book, notes, and other resources while taking the quizzes, but you **may not** discuss the quizzes, either during or after, with other students in the class. Quizzes need to be completed by Sunday 11:59pm EST in the assigned week.

Assignments

Assignments are meant to help you apply the concepts covered in the readings, lectures and other content. The assignments take many formats – case studies, analysis, problem sets. Assignments need to be completed by Sunday 11:59pm EST in the assigned week. Citation and writing expectations vary with each assignment and will be discussed throughout the semester.

The Evaluation Proposal Project

The final assignment will involve creating an evaluation proposal with a detailed description of the research methods and statistics involved. Since it is a proposal, no data collection will be required. The final proposal is due at the end of the semester. **This assignment is required for a passing grade.** Please see Moodle for details.

GRADING

I will provide grades and/or feedback for all assignments within 7 business days of the assignment deadline. Methods of grading and evaluation for assignments are available on Moodle.

Activity	%
Discussions/Reflections	20%
Assignments	47%
Quizzes	18%
Final Proposal	15%
Total	100%

When converting "letter grades" to "numeric grades" (or vice versa), the following values will be used.	
A	94 – 100
A-	90 – 93.99
B+	87 – 89.99
B	84 – 86.99
B-	80 – 83.99
Fail	< 79.99
IN	Incomplete

Resources

Library Access and resources

The Clark University Libraries subscribe to many academic resources and offer research assistance for anyone in the Clark community; including students at a distance. The library team offers short tutorials on how to use library resources and the basics of academic research in a Moodle course called "[Library Research Tutorials](#)." The [Goddard Library Homepage](#) contains links to databases, course research guides, and descriptions of services. For assistance with conducting research or help with a database, use the [Goddard Library Online Help](#) to connect with the library team by phone, email, text or chat.

Clark faculty, staff, and students with domain accounts may access all Clark databases remotely with their Clark University credentials. These are the same way you sign into Moodle and your Clark email. Here you can access over 100 databases and multiple resources to complete your research needs. The library hours are 8am to midnight Monday through Thursday, 8 am to 10 pm on Friday, 10am to 10pm on Saturday, and noon to midnight on Sunday (all times U.S. Eastern Time). Online access is available 24 hours per day. For more information follow this link: <http://www.clarku.edu/research/goddard/>.

When you are off-campus and accessing library resources (such as journal articles or online books in the holdings) you may be prompted for your Clark credentials (username/password).

Technology Requirements

To be successful in this course, you will access materials and submit assignments in Moodle regularly. It is your responsibility to ensure that you can do so. At a minimum to access Moodle, you will need access to the Internet and a supported Web browser (Chrome, Internet Explorer, Firefox, Safari)

In general, you will be expected to submit assignments in MS Word, Excel, PowerPoint or PDF format ([Clark provides MS Office at no extra cost if you need it](#)). Unless the assignment specifically requires an alternate format, please be sure to submit in one of the above formats or I reserve the right not to grade the assignment. If you need assistance with converting or formatting documents, you should contact the ITS Help Desk.

If you need technical assistance with Moodle, using your Clark accounts or with software used for completing course assignments, contact the ITS Help Desk. You may visit the Help Desk in person at the Academic Commons in Goddard

Library, email them at HelpDesk@clarku.edu or phone them at 508-793-7745. Their hours are available at <http://www.clarku.edu/offices/its/support.cfm>.

Policies

Engaged Academic Time at Clark

One unit Clark courses are designed for 180 hours of engaged academic time. The table below outlines an approximation of how the hours are distributed in this course.

Activity	Estimated Time (in hours)
Materials	65
Discussions/Reflections	25
Assignments	40
Quizzes	25
Final Proposal	25
Total	180

Participation

Students are expected to participate every week on Moodle across all activities (viewing, listening, reviewing, writing, discussing). Missing some or all of a week's activities will most likely reduce your grade due to the loss of participation. There will be no makeup or extra credit assignments.

Extensions

If you are unable to complete a quiz or assignment due to illness or other issues, please contact me immediately and I will do my best to work with you. I want to help you stay on track, so please don't wait to contact me when an issue arises.

Academic Integrity

All students are expected to abide by Clark University's Academic Integrity Statement, which can be found at: <http://www.clarku.edu/offices/aac/integrity.cfm>

Academic Accommodations

If you have academic accommodations through Student Services, please provide the details of your accommodations via confidential letter within the first two weeks of the semester.

Clark's Title IX Statement

Please see Clark's Title IX Statement, legislation that prohibits discrimination on the basis of sex, here: <https://www.clarku.edu/offices/title-ix/>

Title IX protects all community members including all female, male, transgender, non-binary, and gender non-conforming students, faculty, and staff.

Course Schedule

Readings and deadlines may be changed at the instructor's discretion. Please note that in the event of the instructor's illness or unexpected caregiving responsibilities, course activities may be adapted or changed. Please review the Moodle course page for the most up-to-date information. Page numbers for both editions of the text are posted on Moodle.

Week 1 (6/21 – 2/27)

Topic: Introduction to Research, Evaluation & Statistics

Readings: See Moodle

Assignments: Discussion, Assignment, Quiz

Week 2 (6/28 – 7/4)

Topic: Variables, Central Tendency and Variability

Readings: Chapters 1, 3 & 4

Assignments: Reflection, Assignment, Quiz

Week 3 (7/5 – 7/11)

Topic: Examining Data & Survey Design

Readings: Chapter 2

Assignments: Discussion, Assignment, Quiz

Week 4 (7/12 – 7/18)

Topic: Inferential Statistics (z -tests & t -tests)

Readings: Chapters 6 & 9

Assignments: Mid-Semester Evaluation, Assignment, Quiz

Week 5 (7/19 – 7/25)

Topic: Inferential Statistics (ANOVA)

Readings: Chapters 11 & 12

Assignments: Discussion, Assignment, Quiz

Week 6 (7/26 – 8/1)

Topic: Inferential Statistics (Correlation & Regression)

Readings: Chapters 13 & 14

Assignments: Assignment, Quiz

Week 7 (8/2 – 8/6)

Topic: Inferential Statistics (Chi-Square) & Course Wrap-Up

Readings: Chapter 15

Assignments: Final Evaluation Proposal, Course Evaluation