

**School of Continuing and Professional Studies
Undergraduate Degrees**

**DCM 308 Introduction to Statistics
Winter 2020**

Faculty: John Hemmerling
Phone/contact: (312) 476-4358
E-mail jhemmerl@depaul.edu

Course Dates: Tuesdays, 1/7/2020 to 3/10/2020

Course Location: Loop Campus

Course Description

British royal advisor Benjamin Disraeli is reputed to have said the following about manipulation of public opinion: "there are three kinds of lies: lies, damn lies, and statistics." Whether or not Disraeli actually said this, our relationship to the use of numbers in addressing public issues continues to be problematic.

Reading the newspaper, perusing consumer reports, analyzing political data are all activities in which we engage on a daily basis. People who want to sway us, or to convince us, or to attract our dollars use statistics to help us make up our minds. How much do we know about how this kind of counting works? In this class, students will look at how numbers add up to give us reasons to be for or against ideas. This course will center on how to create, decode, and analyze statistics.

Some knowledge of mathematics is essential to understanding statistics so prior completion of the Quantitative Reasoning course or it's equivalent would be very beneficial to having success in this class.

Learning Outcomes/Competencies

- Understands the terminology of statistics.
- Can organize data into frequency distributions.
- Can use measures of central tendency and variability to describe frequency distributions.
- Understands the concept of correlation and can use it describe the relationship between two variables.
- Can use sample populations to statistically describe specific tendencies of whole populations.
- Can use statistics to think critically.
- Can use a calculator to make basic statistical calculations.
- Can use basic statistical functions of Microsoft Excel to solve statistics problems.

Competencies:

S-2-X: Can use mathematics or statistics to describe the patterns and processes of everyday life.

F-X: Can use statistics to describe and analyze a problem or issue related to (insert a topic related to the student's Focus Area).

Learning Strategies & Resources

Students will learn the skills necessary to employing descriptive statistics to analyse data. To do this, students will learn how to use several functions in the Microsoft Excel program. A large part of the class will be devoted to teaching students how to use Excel. This time will be spent in the computer lab on campus. Students should also have a scientific calculator to use in class when we are not in the computer lab. The calculator on most smart phones will suffice in most cases.

All course materials will be available on a D2L website. Students are expected to access this website the entire quarter. There is also a My Math lab website that supports the text book that we are using. Students will be expected to register for this website and use it as well during the class. All of the module quizzes will be completed in My Math Lab.

Topics in elementary statistics will be introduced weekly. Discussion is a large part of this course. We will discuss how statistics are used in public discourse each week.

Required text book:

Statistical Reasoning for everyday life 3rd edition
w/My Math Lab Student Access Kit (MML SAK)
Bennett, Briggs & Triola
Pearson/ Addison Wesley
ISBN: 9780321890139

This text is supported by a MyMathLab (MML) website. You must purchase a book that includes the Student Access Kit to access this website. You can also go to Course Compass (<http://www.coursecompass.com/>) and purchase access to the website that includes an electronic version of the book. The latter option is cheaper than the former(purchasing the book). The Course ID needed to register for MML will be available before the class begins.

Suggested readings:

Stat-Spotting: A Field Guide to Identifying
Dubious Data
Joel Best
University of California Press.
ISBN 978-0-520-25746

Freakonomics
Levitt & Dubner
Harper Collins Publisher
ISBN 0-06-073132-X

Both of these books are easy to read and provide a good introduction to statistical analysis.

Additional References:

Statistics for the Utterly Confused
Jaisingh
Mcgraw Hill
ISBN 0-07-135005-5

This book covers the mathematics covered in this class in more detail than the required text. It is relatively inexpensive. It is recommended for students who want to learn how to work more with a calculator.

Attendance and Participation: Attendance and participation are essential. In the event of an absence it is imperative that you (1) let me know ahead of time, and (2) contact a classmate ahead of time to be your "tutor" for the missed session. Always consult our Blackboard for handouts and assignments

Students are expected to arrive on time, and to participate in every scheduled class session. Missing class makes assessment a difficult process, and all students who miss any class time are subject to grade reduction. Missing more than two classes (or 6 hours of class time) can result in a Failing Grade for the quarter.

Learning Deliverables (graded evidences of learning)

Journal Assignments	Excel Projects	Module Quizzes
Four Journal Assignments are 30% of the total grade. These assignments will be used in class discussions.	Three Excel Projects are 30% of the total grade. These assignments will teach students how to use descriptive statistics.	There are 9 module quizzes that are 40% of the total grade. There is one quiz for each chapter covered in the class.

Grading Criteria & Scale

A = 95 to 100%	A- = 91 to 94%	B+ = 88 to 90%
B = 85 to 87%	B- = 81 to 84%	C+ = 77 to 80%
C = 73 to 76%	C- = 69 to 72%	D+ = 65 to 68%
D = 61 to 64%	F = 60% or below	INC

Any grade lower than C- is unacceptable for the SCPS Lifelong Learning or Major requirements. Students can opt for a Pass/Fail grade but must earn a 70% or higher to receive the PA grade. A PA grade does not factor into a student's GPA but a failing grade does.

Course Schedule

Week 1	Intro to Statistics	Reading: Chapter 1 Module 1 Quiz Journal Assignment 1
Week 2	Measurement In Statistics	Reading: Chapter 2 Module 2 Quiz
Week 3	Intro to Graphing Data	Reading: Chapter 3 Excel Project 1 Journal Assignment 2
Week 4	Describing Data/More on Graphing -What is Average: Mean, Median and Mode	Reading: Chapter 4 Module 4 Quiz
Week 5	Measures of Central Tendency -Discuss Percentile Ranking, Variance, Standard Deviation. -What is Normal? -Central Limit Theorem	Reading: Chapter 5 Module 5 Quiz
Week 6	The Basics of Probability -What is probability? -What is the importance of large numbers? -The mathematics of basic probability.	Reading: Chapter 6 Module 6 Quiz
Week 7	Correlation -Correlation vs. Causality -Interpreting Correlation	Reading: Chapter 7 Excel Project 2 Journal Assignment 3 Module 7 Quiz
Week 8	Sampling -What is a population? -Estimating Means and Proportions.	Reading: Chapter 8 Module 8 Quiz
Week 9	Hypothesis Testing -Basics -Testing Means and Proportions.	Reading: Chapter 9 Journal Assignment 3 Module 9 Quiz
Week 10	Analyzing Data	Excel Project 4
Week 11	All Assignments due	

Course Policies

This course includes and adheres to the college and university policies described in the links below:

[Academic Integrity Policy](#) (UGRAD)

[Academic Integrity Policy](#) (GRAD)

[Incomplete Policy](#)

[Course Withdrawal Timelines and Grade/Fee Consequences](#)

[Accommodations Based on the Impact of a Disability](#)

[Protection of Human Research Participants](#)

[APA citation format](#) (GRAD)

University Attendance Policy

Other Resources for Students

[University Center for Writing-based Learning](#)

[SNL Writing Guide](#)

[Dean of Students Office](#)

Suggested readings/sources listed by instructor

Instructor Brief Bio

John Hemmerling began his career with SNL as an academic advisor in 1992. He continues to work in the Advising Center and is also an Assistant Director for Advising Services. He began teaching courses at SNL in 1997 and has been nominated for an excellence in teaching award two times. He has a BS in Mathematics (Chicago State) and a MA in Math Education (DePaul).