

STAT2040: Business Statistics – Blended Class

<i>Instructor</i>	<i>E-mail</i>	<i>Office</i>	<i>Office Hours</i>
Helen Saar, Ph.D.	Canvas mail & saar@dixie.edu	HAZY # 344	T 4:00 – 5:15 pm and by appointment

Class time: T 5:30 – 6:45 pm

Classroom: Hazy #200

Prerequisites:

CIS1200 (Computer Literacy)

MATH1010 (Intermediate Algebra)

Course description from the Catalog

Required of students pursuing School of Business degrees or emphases. Introduction to basic statistical reasoning, including data distributions, descriptive statistics, probability and probability distributions, and sampling distributions, as well as inferential methods such as tests of hypotheses, analysis of variance, "Goodness of Fit", and regression.

Summary of the class

Organizations have endless streams of data at hand to help their employees achieve success in managing the organization. There are accounting, financial, sales, marketing, HR and IS data available internally. In addition, managers can conduct surveys to provide them with information about their customers. Data is also readily available on the external environment – inflation, unemployment, exchange rates etc. STAT2040 Business Statistics class provides an appreciation of *the way in which data can be used* to assist in *solving business problems* and improves *recognition of quantitative aspects within a problem* to better know when statistical assistance is needed. We will also look into ways to communicate statistical results in a clear concise manner.

Course format

This is a blended course and follows a flipped classroom format. This means you are expected to read the assigned textbook chapters, additional readings, and take concept quizzes **before** we cover the material in class. During class time we will discuss current issues related to course topics, and I will answer any questions. Majority of the class time will be dedicated to solving problems and practicing the application of different statistical analysis tools and techniques in MS Excel tools.

Udvar-Hazy School of Business Learning Outcomes (LO)

This course is intended to address the following program learning outcomes on the introductory and developmental levels:

1. A working level knowledge of the core functional areas of business:
 - A. Students will demonstrate a working level knowledge of core business functions related to business statistics.
 - B. Students will be able to analyze a complex business situation, identify relevant business issues, opportunities and problems.
2. The ability to apply higher levels of critical thinking:
 - A. Students will be able to analyze business situations by performing appropriate quantitative and qualitative analysis, synthesize to form alternative solutions; and make recommendations for viable courses of action.
3. The interpersonal and communication skills necessary to succeed in business:
 - A. Students will deliver professional quality oral presentations
 - B. Student will prepare professional quality written presentations
 - C. Students will identify the essential elements of successful teamwork and will reflect upon their competency and experiences in applying them
4. The ability to identify and resolve ethical issues:
 - A. Students will analyze a complex business situation, identify relevant ethical issues and suggest ethical courses of action.

Course Objectives

1. Understand the importance of statistical analysis in the business world in the context of different business areas. [LO 1A, 2]
2. Manage, format and organize collected data. [LO 2]
3. Recognize, calculate and interpret descriptive statistics. [LO 1A]
4. Calculate basic probability events and develop intuition related to probability. [LO 2]
5. Perform statistical case analyses in MS Excel®. [LO 1B, 2, 3B, & 3C]
6. Define and develop hypothesis tests and interpret the results. [LO 2]
7. Define and develop correlation and regression tests and interpret the output. [LO 1B & 2]
8. Present and explain statistical case data in writing with clarity and fidelity. [LO 3B & 3C]
9. Be exposed to issues relating to ethics in statistical reporting. [LO 1B]

Textbook

Essentials of Business Statistics: Communicating with Numbers

By Jaggia and Kelly

Prentice Hall; ISBN: 978-0078020544

Textbook is mandatory! You should read the assigned chapters before coming to class.

Recommended Text: **Statistical Analysis: Microsoft Excel 2010**

By Carlberg

Prentice Hall, ISBN: 978-0-7897-4720-4

Class Notes and Assignments

All lecture notes, external readings, and assignments can be downloaded from *Canvas*®.

Quizzes will be on *Canvas*® and need to be taken by the deadline.

Problem sets need to be posted on *Canvas*® by the deadline, unless said otherwise.

Assignment deadlines will NOT be changed.

MS Excel & Analysis ToolPak

You will also need to use MS Excel for most assignments and the class Project. For statistical analysis you will need to have the Analysis ToolPak Add-in enabled. We will discuss in class how to activate Analysis ToolPak.

Excel provides us with the most basic statistical analysis tools but may be limited in more advanced analysis. Other more common statistical programs include SPSS, Minitab, SAS, and R.

What I Expect of You

I will come to class prepared with application problems and ancillary material. It is your responsibility to prepare for the study sessions and come prepared with questions. I find that students that only make a cursory review of the textbook chapter will struggle with the exams.

- **Read the chapters and additional reading assignments before class! Take notes!** This is critical as the lectures will not be taught in the lab.
- Come to class. Bring your notes and questions. I will take time to answer your questions. Participate in class discussions.
- Form or join and participate in a study group. Meet with the teaching assistant for tutoring.
- Do all the assigned readings, homework assignments, and suggested study problems and questions in a timely manner.
- Come in during office hours or make an appointment to meet at our offices whenever you're having difficulty or have questions you would like to discuss outside of class.

Assignments

Problem Sets

Most of the statistics concepts can only be mastered through practice and solving of problems related to the topic. It is beneficial to solve as many exercises, questions and problems at the back of each chapter as possible. This will help you develop the intuition and skills that will be valuable both in corporate world and your personal life.

There will be **8 to 10** Problem Sets. The problem sets will emphasize the learning of MS Excel skills and **COMMUNICATING** the results correctly, clearly and professionally. The way to get high grades on these assignments is to **start early, ask questions when you get confused, and turn in the assignment on time**. Another good reason for doing well on Problem Sets is that most of the exam questions will be related and/or use the computer printouts from the Problem Sets.

I encourage you to **work in a group** to solve the problem sets. BUT make sure that you learn the Excel skills by doing the problem sets yourself and that **your written work is in your own words**. If there are multiple papers with substantial overlap, **only one grade will be assigned and that grade will be equally divided among overlapped papers**.

The problem sets are to be turned in to *Canvas*®. Late submission is not accepted.

One lowest problem set grade will be dropped and will not count toward the final course grade.

Quizzes

Quizzes will be posted on *Canvas*®. They are designed to check your knowledge of key terms and definitions. **One lowest quiz grade** will be dropped and will not count toward the final course grade.

Exams

There will be three exams: 2 mid-term exams and a final exam. The exams will not be comprehensive. Each exam will consist of a combination of multiple choice questions and analytical problems. The exams will test your ability to **interpret the results** of statistical analysis and **make managerial conclusions** based on these results. You must have a written medical excuse to be absent from the exam.

Extra credit Assignments

Throughout the semester there will be **two** extra credit assignments that will be posted on *Canvas*®. Completing these assignments is voluntary. They are to be turned in to *Canvas*® by the given deadline. Each extra credit assignment will be graded.

Course Grade

Your course grade will be based on the total points accumulated on the various assignments completed. The following weights pertain to those assignments:

◆ Attendance and participation	10%
◆ Quizzes:	10%
◆ Problem sets:	20%
◆ Midterm Exam 1:	20%
◆ Midterm Exam 2:	20%
◆ <u>Final Exam:</u>	<u>20%</u>
	100%
◆ <u>Extra Credit assignments:</u>	<u>2%</u>
	<u>102%</u>

The letter grades will be assigned as follows:

93% and up – A	83.0-86.9% – B	73.0-76.9% – C	63.0-65.9% – D
90.0-92.9% – A-	80.0-82.9% – B-	69.0-72.9% – C-	60.0-62.9% – D-
87.0-89.9% – B+	77.0-79.9% – C+	66.0-68.9% – D+	Below 60% – F

Class Communication

Important class information will be sent to your Canvas Inbox and/or via Canvas Announcement function. You will be held responsible for information sent to your Canvas account, so please check it often.

Class Rules and expectations

Students who attend class, come to class prepared, and participate tend to do better in this class. This class requires you to take active role in your learning. Come to class prepared and get involved. It is my responsibility as an instructor to manage the classroom environment to ensure a good learning climate for all students. I expect you to help by doing the following: (1) turn off your cell phones; (2) do not talk when the presenter is talking; (3) speak and act respectfully to the fellow students; (4) use your laptop or tablet for class purposes only; and (5) please be on time to class!

Student Rights and Responsibilities Policy:

<http://catalog.dixie.edu/codeofstudentrightsresponsibilities/>

Disability Accommodations

If you are a student with a medical, psychological, or learning disability or think you might have a disability and would like accommodations, contact the Disability Resource Center (652-7516) in the North Plaza and inform me at the **beginning** of the semester. The Disability Resource Center (<http://dixie.edu/drcenter/>) will determine eligibility of the student requesting special services and determine the appropriate accommodations related to their disability.

Academic Integrity

In order to ensure that the highest standards of academic conduct are promoted and supported, students must adhere to generally accepted standards of academic honesty, including but not limited to, refraining from cheating, plagiarizing, falsification, misrepresentation, and/or inappropriately collaborating. The University shall hold students accountable for instances of academic dishonesty and apply appropriate consequences. Refer to **Student Rights and Responsibilities Policy, Section 4 part XI** for detailed definitions about student misconduct: <http://catalog.dixie.edu/codeofstudentrightsresponsibilities/> .

Title IX Statement

DSU seeks to provide an environment that is free of bias, discrimination, and harassment. If you have been the victim of sexual harassment/misconduct/assault we encourage you to report this to the college's Title IX Director, Cindy Cole, (435) 652-7731, cindy.cole@dixie.edu. If you report this to your instructor or the teaching assistant, she or he must notify the DSU Title IX coordinator about the basic facts of the incident.

Additional Resources

Additional Syllabus Information: <https://academics.dixie.edu/syllabus/>

Library: <http://library.dixie.edu>

Writing Center - http://new.dixie.edu/english/dsc_writing_center.php

Testing Center - <http://dixie.edu/testing>

Tutoring Center - <http://dsc.dixie.edu/tutoring/>

Career Center - <http://career.dixie.edu/>

The Office of Ombuds: <http://ombuds.dixie.edu/>