

BA 501 – Statistics

Winter 2021 Syllabus

(subject to change)

Class Hours: Monday & Wednesday, 10:30 am - 12:00 pm, 1:30 pm - 3:00 pm

Instructor: Foad Iravani

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Why Is This Course Important?

Probability and statistics are fundamental to management education. Business decisions are usually made with partial information in environments characterized by uncertainty and risk. The objectives of this course are to introduce you to (i) data analysis tools that are appropriate for generating useful information for decision making and (ii) a framework for analyzing decisions based on partial information. In order to achieve these objectives, we will develop a foundation of probability and statistics. Examples from financial analysis, marketing, operations management, etc. are used to illustrate applications of the topics covered. This grounding complements previous core courses and is also necessary for future core and elective courses in the MBA program. This course comprises of two major and somewhat overlapping modules:

- **Module 1. Descriptive Statistics:** Descriptive statistics focuses on the tools for describing and summarizing data in meaningful ways as well as measuring and representing uncertainty with probability distributions and random variables. Topics in descriptive statistics include representing data through numerical summaries and graphs, measuring the association between variables, measuring uncertainty using probability rules and probability distributions.
- **Module 2. Inferential Statistics:** Inferential statistics focuses on using sample data to test hypotheses and make inferences about the characteristics of a population. Topics include sampling, estimating population parameters, testing hypotheses, and conducting regression analyses.

Although the course is quantitative in nature, it is not a mathematics course. While the mathematical ideas are briefly explained to understand the logic behind the analyses, the emphasis is on applications of statistical tools and their uses for decision making in managerial positions.

The course heavily relies on using Excel spreadsheets. While the Excel Data Analysis Toolpak provides various data analysis tools, it has limitations. As a result, we will use the StatTools add-in for Excel, which is a component of the Palisade Suite developed by the Palisade Corporation and is a powerful tool for statistical analysis in Excel.

Required Textbook and Software

S. Christian Albright and Wayne L. Winston. **Business Analytics: Data Analysis and Decision Making**. 6th edition. Cengage Learning.

This book is rather expensive. You may go to the publisher's site to buy/rent the digital version of the book or rent the print book at a lower cost. <https://www.cengage.com/c/business-analytics-data-analysis-decision-making-6e-albright?filterBy=Student>

Note: Make sure that you have acquired the book problem sets and data files.

The book covers many probability and statistics concepts in a nice intuitive way using Excel add-ins. The companion website is a rich source of support. It provides the data files for all examples in the chapters (usually two versions – a template and a finished version), and data files for problems and cases in each chapter. It also provides an Excel tutorial, tutorial videos for StatTools, and other bonus materials. To access these resources, go to www.cengagebrain.com, create an account, look up the book, and go to “Student Companion Site”.

In order to obtain StatTools, you need to download and install the Palisade Suite on your computer. The companion website provides a link to the Palisade website. You will be asked to enter a word from the book's Index and fill out a form to download the software. **Note that Palisade Suite is not compatible with Mac. You need to install a Windows emulator on your computer.**

Strategies for Success

- Ignore preconceptions about statistics.
- Complete required readings before each class.
- Do not fall behind. Revisit the topics discussed in the previous class.
- Seek assistance. Take advantage of office hours and review sessions.

Grading Policy

Your grade will be calculated based on class participation, assignments, and the examinations as follows:

Class Participation	20%
Individual and Team Assignments	25%
Midterm Examination	25%
Final Examination	30%

Class Participation

The first component of class participation is the students' contribution to and engagement in class discussions. Students are expected to come to each class having read all the material and ready to share their views. The nature of contributions that students are expected to make in class depends on whether we are covering basic concepts, or discussing managerial implications of analyses. Excellent participation means helping the entire class with relevant questions, contributions, and clarifications.

The second component of class participation is in-class exercises. Starting class 2, you will work on in-class exercises to review the concepts introduced in that class and to practice statistical analyses in StatTools. If for some reason you cannot finish an in-class exercise during class time, you can submit it until 6 pm on the day of class. In-class exercises will receive a grade of 0, 1, 2, or 3.

You may bring tablets for note-taking. Please refrain from using computers, phones, tablets, and similar technologies during class for emails, Facebook, LinkedIn, chatting and other non-educational activities that could distract your fellow students. **Inappropriate use of laptops or other electronic devices will adversely impact your participation grade.**

Assignments

There will be individual and team assignments throughout the course. The assignments contain conceptual, calculation, and computer questions to help you review the material covered in class. The assignments play an important role in understanding and applying statistical tools. Although you may discuss individual assignments with other students, each student must turn in their own answers. For team assignments, one member from each team must submit one file on behalf of the team members. Assignments may have different total points but they have equal weights in the determination of your final grade.

There will be a 50% penalty for assignments that are submitted within 12 hours after the due date. There is one due date for both sections. Assignments submitted later than 12 hours after the due date will receive zero credit. The penalty may be waived only in cases of severe illness (subject to my discretion).

Individual assignments can be handwritten; however, hand-written answers must be clean and easy to read. You will not get credit if your handwriting is not legible. Team assignments must be typed. All members of each team are expected to contribute to team assignments and will receive the same credit. If you feel there is a serious problem or issue with the participation of a team member, please contact me.

Exams

There will be a take-home midterm and a take-home final examination. Further instructions will be provided before each exam. You may not take the exams at a different time, except in extreme circumstances, such as an illness, at my discretion.

TA Review Sessions and Office Hours (Combined)

The TA will hold weekly review sessions on Thursdays 8:45 am - 10:15 am. Participation in review sessions is encouraged, but not required. All review sessions will be conducted via a Zoom session. Recordings of the sessions will be posted to this page shortly after the session ends.

Professionalism

Class attendance is critical to participation in the learning experience and is required, except for extreme circumstances related to illness or a critical work event with your sponsoring employer that cannot be rescheduled. If you are not able to attend a particular class session, please email me in advance to explain the reasons. Regardless of the rationale, please note that you are responsible for the learning experience that takes place in your absence. Each student is expected to be fully engaged in class content. Students should respect the instructor and the views and opinions of their fellow students.

Academic Integrity

I employ the principles and procedures espoused by the University of Washington Student Conduct Code to maintain academic integrity in the course. The Code establishes the expectation that students will practice high standards of professional honesty and integrity. In particular, implementation of the Code at the Foster School of Business prohibits cheating, attempted cheating, and plagiarism—including improper citations of source material—as it pertains to academic work. Suspected violations will be handled in compliance with the University of Washington Student Conduct Code.

Accommodations

If you have a special need and/or a disability that requires academic accommodations, please see me as soon as possible. For more information, please contact the Disability Resources for Students Office, 448 Schmitz Hall, 206-543-8924.

Religious Accommodations

“Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW’s policy, including more information about how to request an accommodation, is available at [Religious Accommodations Policy](#). Accommodations must be requested within the first two weeks of this course using the [Religious Accommodations Request form](#).