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COMMUNICATION

The best way to reach me is to send an email. Please use GSB519 as a prefix on the subject line to get my attention. If you don't receive my reply within 24 hours, please remind me again. Due to some email filters, your email might be lost. Email is only for any personal issues. All questions related to course material and homework should be posted on D2L. You will find the right answers on the discussion in D2L.

OFFICE HOURS

In-Person or ZOOM Every Tuesday and Thursday 4:00-5:00 PM
Any suggested topics are welcome via email prior to the meeting as a group. It can be a personal office hour and serve as first-come-first-serve. ZOOM Address for office hours:
https://depaul.zoom.us/j/95326652941

COURSE OBJECTIVES

The course objective is to provide practical knowledge of mathematics, probability, statistics, and regression techniques that are the most relevant tools in a graduate business program and useful tools to make business decisions. Mathematics and probability will be extensively used in some of your graduate courses. They are also important foundations for statistics and regression analysis and any advanced level of data analytic classes. The course develops ideas, concepts, and vocabulary that any graduate-level programs are expected to know. Although the course is problem-oriented, it also is analytical and theoretical to the extent to develop correct insights and practical understanding of topics presented.

REQUIRED TEXTBOOK

Statistics for Managers using Microsoft Excel, 8th Edition, David M. Levine, David F. Stephen, Kathryn A. Szabat
(ISBN-13: 978-0134173054, ISBN-10: 0134173058)
Weekly class material will be available on D2L including algebra reviews.

RECOMMENDED SUPPLEMENTARY TEXTBOOKS

From DePaul library, you can also access two useful books via online;
Business Statistics Demystified by Steven M. Kemp and Sid Kemp.
Statistics for Dummies by Deborah Rumsey.
Jin W. Choi, Step-by-Step Business Math and Statistics, 3rd, 2010, ISBN: 0536560706

EXAMS

- Midterm Exam will be given in week 6. Midterm Exam will be open on October 18 at 8:00 AM and must be completed by October 24 at 10:00 PM (Maximum of 180 minutes).

- Final Exam will be given at the end of 10th week. Final Exam will be open on November 16 at 8:00 AM and must be completed by November 21 at 10:00 PM (Maximum of 180 minutes).

- All exams will be available on D2L (Open Book and Open Notes)

ASSIGNMENTS

Weekly homework will be posted in D2L after weekly class material posted, and it will be due every Monday at 10:00 PM. There are two types of questions; end of chapter quizzes and essay questions.

- The essay questions need to be submitted to "Submission". Type the answers. If you need to draw graphs or equations, you can submit the scanned or photo copies of the answers.

- For the end of chapter questions, you can try three times, and the highest score will be recorded as your grade. The questions will be randomly assigned so that each trial will have a different set of problems. It is strongly recommended to review all relevant material before attempting the questions, especially my class note and textbook. All answers will be available shortly after submission for review.

SOFTWARE

- Excel is the main software for the course. Any enrolled students may obtain Microsoft Office 365 ProPlus without charge. For software policy, please review for the following website:
  https://offices.depaul.edu/information-services/services/Software/Pages/Software-for-Personal-Computers.aspx

- Minitab may be used in part of the course, especially in the regression analysis. Minitab also is available in all of DePaul's computer labs; and, in addition, it is available remotely through DePaul's Virtual Lab, simply type http://vlab.depaul.edu and sign-in as you would to Campus Connect (a 30-day Minitab free trial is also available from http://www.minitab.com).

- Cloud computing as a virtual lab also available for this quarter only: https://depaul.apporto.com/

GRADE

Weekly Homework (1-10) (5% each, total 50%), Midterm Exam (25%), Final Exam (25%)
Scale of grade: A: 93 or above, A-: 88-92.9, B+: 85-87.9, B: 80-84.9, B-: 77-79.9, C+: 75-76.9, C: 70-74.9, C-: 68-69.9, D+: 65-67.9, D: 60-64.9, F: Below 60

COMPUTER INSTRUCTION

Instructions for all computer software, Microsoft Excel and Minitab, will be given by lectures.

No prior knowledge is necessary to perform any computational work.

ACADEMIC HONESTY
Work done for this course must adhere to the University Academic Integrity Policy. Violations include but are not limited to the following categories: cheating; plagiarism; fabrication and academic misconduct.

- Cheating: any action that violates University norms or an instructor's guidelines for the preparation and submission of assignments. Such actions may include using or providing unauthorized assistance or materials on course assignments, or possessing unauthorized materials during an examination.

- Plagiarism: the representation of another's work as your own. You are to prepare your own homework assignments. Violations may result in the failure of the assignment, failure of the course, and/or additional disciplinary actions.

- Misconduct: This includes but is not limited to attempts to bribe an instructor for academic advantage; persistent hostile treatment of, or any act or threat of violence against, an instructor, advisor or other students. Violations may result in additional disciplinary actions by other university officials and possible civil or criminal prosecution.

You may review the Academic Integrity Policy in the Student Handbook or by visiting Academic Integrity at DePaul University (http://academicintegrity.depaul.edu)

STUDENT WITH DISABILITY
The Center for Students with Disabilities (CSD) offers reasonable academic accommodations and services to support students. It also serves as a resource to the many university departments that have a responsibility to accommodate students. For more information on CSD program, you may visit https://offices.depaul.edu/student-affairs/about/departments/Pages/csd.aspx or call: 312-362-8002.

SUMMARY OF WEEKLY SCHEDULE
Here is the schedule for each week

1. Tuesday 8:00 AM : New weekly material will be posted in D2L including lecture notes and weekly homework

2. Tuesday 5:45-9:00 PM Lecture (attendance required for attendance credit)

3. Monday 10:00 PM : All Weekly Assignments Due

TENTATIVE SCHEDULE OF TOPICS
(The instructor may change the order or contents by needs, any special material needs for the class will be available on D2L)

I. Mathematics for Business Analytics

- WEEK 1
  Sets, Counting Rules, and Summation Notation (reading material on D2L)
  Functions – linear, quadratic, exponential, logarithmic functions (reading material on D2L.

II. Business Statistics

- WEEK 2 (CH 1-3)
  Data Collection and Descriptive Statistics
  Calculating Probabilities – basic events, unions and intersections of events

- WEEK 3 (CH 4-5)
  Conditional probabilities, Bayes Formula
  Discrete Probability Distributions (Bernoulli, Binomial, Poisson Distribution)

- WEEK 4 (CH 6)
  Continuous Probability Distribution (Normal, and t Distribution)

- WEEK 5 (CH 7-8)
  Sampling Distributions and Confidence Interval Estimation

- WEEK 6 10/12-10/17
  Review and Midterm Exam Week
  <u>Midterm</u> (Starts on Oct 18 at 8:00 AM and must be completed by Oct 24 at 10:00 PM (Maximum of 180 minutes))

- WEEK 7 (CH 9-11)
  Hypothesis test for One Sample
  Two Sample Test and Analysis of Variance

III. Regression Analysis

- WEEK 8 (Ch 13),
  Simple Regression Analysis

- WEEK 9 (CH 13-14)
  Multiple Regression Analysis

- WEEK 10 (Combination of Ch13-14 and Nonlinear Equations)
  Nonlinear Regression Model, Logistic Regression Model

IV. Final Exam

- <u>FINAL EXAM</u> (open on Nov 16 at 8:00 AM and must be completed by Nov 21 at 10:00 PM (Maximum of 180 minutes))