

IT403 Statistics and Data Analysis
Fall 2017 / 2018 Course Syllabus
Update 9/8/17

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Contact Hours: Thursday's at 1:00 pm to 2:30 pm or by appointment at other times.

Course website: <https://d2l.depaul.edu/>

Summary of Course

The aim of the course is to illustrate statistical and data analysis methods and basic concepts of probability theory. The course topics include descriptive statistics, data visualization, an introduction to statistical inference (confidence intervals and hypothesis testing), analysis of two-way tables and linear regression models. The students will learn the statistical package SPSS and use it to compute statistical analyses of data sets from real-world applications. The objectives of this course are:

- to develop an understanding of the basic concepts of probability and statistics,
- to help students to be informed and critical readers of quantitative arguments,
- to provide sufficient skills to apply simple statistical techniques with the aid of a computer,
- to appreciate the role of statistics in empirical research and scientific study,
- to gain flexible problem-solving skills applicable to unfamiliar statistical settings.

Prerequisites: Students are expected to understand basic mathematical notation and be familiar with college algebra concepts. See this link for a good online tutorial:

http://www.wtamu.edu/academic/anns/mps/math/mathlab/col_algebra/index.htm

Required Textbook and Printed Resources:

Introduction to the Practice of Statistics, Ninth Edition, by D.S. Moore, G.P. McCabe and B. Craig (2017). (NOTE: Previous editions of the book are fine)

An excellent online resource is the free statistics book at

<http://onlinestatbook.com/2/index.html>

Notes and video tutorials about SPSS will be posted at the course website. It is the student's responsibility to download and be familiar with all the course documents and notes posted at the course website.

Statistical package

The statistical package used in this course is SPSS and is available in all DePaul labs. You can access SPSS remotely by using our CDM terminals (suitable for fast connections). More information about the software is posted on the course website.

Grading Policy. The final grade has the following components:

- *Discussion forum participation (5%)*: For each module, students will be asked to discuss a topic related to the module content.
- *Online quizzes (10%)*: The quizzes will be posted on D2L (<http://d2l.depaul.edu>). Students are allowed to retake the same quiz a certain number of times, and therefore learn from their mistakes. Through this exercise, students will be able to test their understanding of the module topic.
- *Homework assignments (40%)*: **There will be weekly assignments.** Late submissions will not be accepted after six days from the due date. Notice that a 30% point penalty will be applied to late submissions. Extensions may be granted only for exceptional reasons. Requests for extensions must be received BY EMAIL before the due date.
- *Midterm exam (20%)*: The test will be proctored and students will be allowed to use a limited amount of notes during the exam. Students should bring a calculator (no phones are allowed).
- *Final exam (25%)*: The final exam will be cumulative. The test will be proctored and students will be allowed to use a limited amount of notes during the exam. Students should bring a calculator (no phones are allowed). See section on Final exam for more details.

Students receiving more than 90% of possible points are guaranteed at least an A-, more than 80% at least a B-, more than 70% at least a C-, and more than 60% at least a D.

Specific grade distributions will be communicated by 9/16/17.

Remarks about homework Working through homework exercises and applying the statistical concepts to real problems is a critical step for building a complete understanding of the statistical concepts. Only by trying to apply the statistical techniques you can test if you really understand them. Homework assignments should be regarded as a genuine “learning experience.” Study groups are encouraged, but you should, however, be sure that the effort is truly collaborative. The best strategy for completing the assignment is to begin tackling the questions alone, then discussing with others, and finally writing up your answers by yourself. Feel free to consult the instructor when you are stuck.

Midterm and Final exams:

Online students must schedule their **midterm and final exams** at a site and time that will be communicated by 9/16/17. Students living within the Chicago land area are considered local and will be expected to take their exams at a DePaul University campus. Time slots vary by campus and day.

Online students living outside the Chicago land area (remote) will have their exams administered by a qualified proctor. You will need to find an acceptable proctor in your area before you register for your exam. Detailed information about online exams is at <http://blogs.cti.depaul.edu/colwiki/Wiki%20Pages/How%20Do%20I%20Take%20My%20Exams.aspx>

Students are expected:

1. To read this document in full!
2. To check email messages regularly and to keep the current email account information on <http://campusconnect.depaul.edu>.
3. To read course announcements on a regular basis. **Weekly updates will be posted every Monday on the Course Information forum** of the course website. Course updates will be posted throughout the quarter and/or emailed to students.
4. To participate actively to class discussions and activities and to work on the practice problems and exercises that are designed to improve students' understanding of the class topics.
5. To be familiar with all the course documents and notes posted at the course website.
6. To read all the sections in the textbook relevant to the modules. The reading assignments are listed in each module. Notes are meant to complement the course textbook NOT TO REPLACE IT.
7. **To contact me regularly and ask me questions related to the course.** If you are on campus, you can stop by my office (room TBD of CDM building) during contact hours, or by appointment at other times. The best way to contact me is through email at ehearon@depaul.edu. Most emails will be answered within 24 hours.
8. To post on the discussion forum messages that are of interest to the entire class.
9. To work independently on course assignments and not to copy or submit someone else's work as your own. See also University academic integrity policy below.

Tutors

CDM offers free tutoring for many of its courses. The tutors' schedule is at:

<http://www.cdm.depaul.edu/advising/Pages/TutoringProgram.aspx>.

Remember that I am your "best tutor". If you have any difficulty with the course topic, you should not hesitate to contact me for any question regarding the assignments.

University Academic Integrity Policy

Students are expected to strictly adhere to the University Academic Integrity Policy, that is published in the Student Handbook or at the Academic Integrity site at DePaul University (<http://academicintegrity.depaul.edu>). Violations of the University Academic Integrity Policy include (but are not limited to): (a) using or providing unauthorized assistance or materials on course assignments; (b) possessing unauthorized materials during an examination; (c) submitting as one's own any material that is copied from published or unpublished sources such as the Internet, print, computer files without proper acknowledgement that it is someone else's; (d) submitting as one's own work a report, examination, paper, computer file, lab report or other assignment which has been prepared by someone else.

If you are unsure about what constitutes unauthorized help on an exam or assignment, or what information requires citation and/or attribution, please ask your instructor. If proven, violations may result in the failure of the assignment, failure of the course, and/or additional disciplinary actions.

