DSC 323 & 423: Data Analysis and Regression

Course Information

Title: DSC 323 & 423: Data Analysis and Regression
Location: Online Only (d2l.depaul.edu)

Contact Information

Instructor: Jonathan Gemmell
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Emails

I make every attempt to reply to emails within 24 hours. Include the course number (DSC 423 or DSC 323), your name, and your student ID in the title of the email. Emails should be written in a professional manner with clear and concise language.

Course Overview

Multiple regression and correlation, residual analysis, analysis of variance, and robustness -- These topics will be studied from a data analytic perspective, supported by an investigation of available statistical software.

Online Requirements

This is an online only course. You will need at minimum:

- Frequent access to a computer that connects to the Internet.
- A working e-mail account that you check regularly (and that is updated in Campus Connection)
- Access to a software suite such as Microsoft Office (Word, Excel, Power Point). If you do not have access to Office, you can download a free, open source alternative such as Open Office (http://www.openoffice.org/) that will give you the same basic functionality.
- Access to a computer with R and RStudio including administrator for installing packages.
- The ability to view video files, either in a streaming (Flash) or downloadable (mp4, mov) format.
- The ability to record videos with a camera and microphone.

Course Prerequisites

IT403 or IT 223. Students are expected to understand basic mathematical notation and be familiar with college algebra concepts.

CSC 324 versus CSC 423

Undergraduates and graduates will have the same schedule and assignments. Undergraduates will have fewer requirements on the project and exams.

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and sent via email.

Attendance

As this in an online class, there is not a requirement for attendance. However, students must plan to interact with the class several times per week. Weekly activities will include 1) watching lectures, 2) completing quizzes on the lectures, 3) watching tutorials, 4) completing activities based on the tutorials, 5) completing a reading and submitting a response to the discussion forums, 6) submitting a video response to the D2L, and 7) completing a project milestone. Additionally, requirement include completing assignments, a midterm and a final exam.

Course Management System

We will use DePaul University's Desire2Learn system (d2l.depaul.edu).

News Widget

The primary form of communication for this class will be the news widget on the D2L. Subscribe to the widget and that DePaul has you correct email.

Forums

The class forum is the preferred place to ask questions about the class. If you have questions about a quiz question, the exams or lecture notes, please post them there. I read these frequently. All students should subscribe to the forums so that you receive email updates.

Text book

(Recommended, but not required) Mendenhall and Sincich, Second Course in Regression Analysis, 8th Edition, Prentice Hall/Pearson, 2019.   Older versions are acceptable.

Software

The statistical packages used in this course are R and RStudio. They are available in all DePaul labs. Tutorials using R will be presented every week.

Grades

Class Contract, Lecture Quizzes, and Tutorial Activities: 10%
Readings and Forum Responses: 5%
Video Responses: 5%
Assignments: 20%
Projects: 30%
Exams: 30%

Class Contract

All students must complete the class contract. It is meant to ensure that you have read the syllabus and understand the requirements for the course. The contract may be found under "quizzes" on the D2L.

Lecture Quizzes

There are three quizzes each week, requiring only a small amount of time. Quizzes may be taken as many as 10 times and only the highest grade is recorded. Quizzes are taken online through the D2L. The purpose of the quizzes is not to test your knowledge. You may (and are encouraged) to work through the problems with your fellow classmates, seek out the help of tutors, ask questions or even offer potential solutions on the forums. The purpose of the quizzes is to prepare you for the exams. The questions are very (VERY!) indicative of what will be on the exam.

Tutorials Activities

There are two tutorials per week. The tutorials are meant to give specific examples using R and experience working with real datasets. As with the quizzes, students are encouraged to work together on the tutorials. The tutorials may be taken as many as 10 times and only the highest grade is recorded. The tutorials are taken online through the D2L.

Readings and Forum Responses (Graduate Only)

There are 10 assigned readings throughout the quarter. Readings are drawn from academic journals to the popular press, from theoretical concepts to practical applications and from interesting recent findings to important historical results. The responses are due every week and will be entered into the class discussion forums. Grades will be assigned based on the depth of your insight and your activity in the online discussions.

Video Responses

Every week you will be required to submit a video response to a question. Generally, these questions are selected to represent potential questions you might encounter at a job interview. The purpose of these questions is to provide you with the opportunity to practice presenting complex and abstract ideas in a succinct and clear presentation. The best example will be highlighted.

Assignments

Assignments must be completed independently. Whereas the quizzes and exam lean more theoretical, the tutorial activities and the assignments lean more practical. Assignments require students to use prepare data, build models and draw insights from datasets.

Class Project

The class project is a significant part of the class and thus requires a significant amount of effort. Students will work in groups of three to five students. Weekly milestones are meant to keep you on pace. The project culminates with a 20-page report. See the project milestones on the D2L.

Exams

There will be two exams. A take home midterm will be given during week six. The final exam will be given during week 11. The exam may not be rescheduled accept under extreme extenuating circumstances. The final exam is closed-book and closed -notes.

Late Policy

Late Quizzes, Forum Responses and Video Reponses receive 0 points without exception. Late assignments are penalized 1% per hour.

Final Grades

A: 90% - 100%
B: 80% - 90%
C: 70% - 80%
D: 60% - 70%
F: less than 60%

- Plusses and minuses are given for the upper and lower 3% in a letter's range.   There is no A+.
- You may not pass the class if you do not receive a passing grade on the final exam and the final report.

Plagiarism

Students in this course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work any assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials be sure to consult the instructor.

Academic Integrity

Work done for this course must adhere to the University Academic Integrity Policy, which you can review in the Student Handbook or by visiting "Academic Integrity" (academicintegrity.depaul.edu) at DePaul University.

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at:

http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx

Incomplete Grades

An incomplete grade is a special, temporary grade that may be assigned by an instructor when unforeseeable circumstances prevent a student from completing course requirements by the end of the term and when otherwise the student had a record of satisfactory progress in the course. All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptions cases will receive such approval. Information about the Incomplete Grades policy can be found at:

http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx

Proctored exams

If you are an online learning student living in the Chicagoland area (within 30 miles of Chicago), you will need to come to one of DePaul's campuses to take an exam. Online learning students outside of the Chicagoland area are required to locate a proctor at a local library, college or university. You will need to

take the exam within the window your instructor gives. Students should examine the course syllabus to find exam dates and the instructor's policy on make-up exams. Detailed information on proctored exams for online learning students can be found at: www.cdm.depaul.edu/onlinelearning/Pages/Exams.aspx

Writing Center

Consider contacting or visiting the Writing Center to discuss your assignments for this course or any others. You may schedule appointments (30 or 50 minutes) on an as-needed or weekly basis, scheduling up to 3 hours worth of appointments per week. Online services include Feedback-by-Email and IM conferencing (with or without a webcam). All writing center services are free.

Writing Center tutors are specially selected and trained graduate and undergraduate students who can help you at almost any stage of your writing. They will not do your work for you, but they can help you focus and develop your ideas, review your drafts, and polish your writing. They can answer questions about grammar, mechanics, different kinds of writing styles, and documentation formats. They also can answer questions and provide feedback online, through IM/webcam chats and email. Obviously, the tutors won't necessarily be familiar with every class or subject, but they are able to provide valuable help from the perspective of an interested and careful reader as well as a serious and experienced student-writer.

Students with Disabilities

Students seeking disability-related accommodations are required to register with DePaul's Center for Students with Disabilities (CSD) enabling them to access accommodations and support services to assist with their success. There are two office locations:

- Loop Campus – Lewis Center #1420 – (312) 362-8002
- Lincoln Park Campus – Student Center #370 – (773) 325-1677

Students who register with the Center for Students with Disabilities are also invited to contact Dr. Gergory Moorhead, Director of the Center, privately to discuss how he may assist in facilitating the accommodations to be used in a course. This is best done early in the term. The conversation will remain confidential to the extent possible. Please see:

https://offices.depaul.edu/student-affairs/about/departments/Pages/csd.aspx

Schedule your appointments with enough time to think about and use the feedback you'll receive. Bring your assignment handout and other relevant materials to your appointments.

Student Evaluations

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Please see https://resources.depaul.edu/teaching-commons/teaching/Pages/online-teaching-evaluations.aspx for additional information.