

**MBA 4360-181: Opportunities with Data Skills II**

<b><u>Term and Credits:</u></b> Spring 2020 4 Credit Hours CRN: 2790	<b><u>Time and Location:</u></b> M/W 12:00-1:50pm online through Zoom Final Class Day: Wed Apr 29 12:00-1:50pm You will be required to review some material outside of class which will be delivered through Canvas. Make sure you have a good internet connection during class time for access to Zoom and Canvas.
<b><u>Instructor:</u></b> Name: Kellie Keeling Department: Business Information & Analytics Office Hours: TBD Virtual Office Location: <a href="https://udenver.zoom.us/my/kelliekeeling">https://udenver.zoom.us/my/kelliekeeling</a> Email: kkeeling@du.edu Office Phone: 303-871-2296 (forwards to my cell)	<b><u>Communication Conduct:</u></b> Feel free to refer to me as Dr. Keeling, Professor, or Kellie as you feel comfortable.  Email is usually the best way to contact me. If I haven't responded in 36 hours, feel free to resend your message.  I will send class level communications via Canvas announcements. I will typically initiate communication with individual students directly through your DU email or through Canvas email.  My open office hours times are available on the home page in Canvas under "My Office Hours."

**COURSE DESCRIPTION:**

Develop an understanding of more complex concepts of probability and statistics, and how they relate to managerial type problems and decision making. Develop experience performing and interpreting complex analysis methodologies. Obtain further familiarity with statistical software packages. Develop experience integrating data skills with project for Corporate Challenge.

**PREREQUISITES/CO-REQUISITES:**

Enrollment in the Full time Denver MBA program and MBA 4160

**LEARNING OUTCOMES and MODULES**

1. Understand and implement the data mining process including the steps of data wrangling, exploration, analysis, evaluation, and presentation of results.
2. Identify and perform the correct data mining technique for a particular problem.

MODULE 1: Data Mining Process

MODULE 2: Data Wrangling and Exploration

MODULE 3: Dimension Reduction

MODULE 4: Evaluating Performance

MODULE 5: Prediction and Classification Methods

## REQUIRED MATERIALS:

- Software:
  - Excel with Analysis ToolPak: Get latest version from Office365.du.edu if needed.
  - JMP Pro 14:
  - Optional: Python or R
  - Piazza: Sign up in Canvas
- Textbook choose a version: All versions also available through the library website Books 24x7 database (find here: <http://libguides.du.edu/az.php?a=bLinks to an external site.>)
  - *Data Mining for Business Analytics: Concepts, Techniques, and Applications with JMP Pro* (Galit Shmueli, Peter C. Bruce, Mia L. Stephens, Nitin R. Patel)
  - *Data Mining for Business Analytics: Concepts, Techniques and Applications in Python* (Galit Shmueli, Peter C. Bruce, Peter Gedeck, Nitin R. Patel)
  - *Data Mining for Business Analytics: Concepts, Techniques, and Applications in R* (Galit Shmueli, Peter C. Bruce, Inbal Yahav, Nitin R. Patel, Kenneth C. Lichtendahl Jr)

## GRADING STRUCTURE, SCALE, AND POLICIES:

**Communication.** If you are having difficulty with the course material, please reach out at your earliest convenience. If you are having an emergency situation, please let me know so we can plan accordingly. If you contact me with questions, I plan on responding within 24-36 hours. If your question may benefit others, I request that it is posted to the course discussion board on Piazza.

**Piazza Discussion Board.** This term we will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates and myself. Rather than emailing questions to me directly, I encourage you to post your questions on Piazza (either privately to me or to the class). Find our class page on the Canvas Navigation for this course.

**Polling.** During class I will post polls in Piazza to help assess student comprehension of topics or gather informal data. These will count as participation credit and be assessed on the scale: Full Participation/Correctness 100%, Full Participation mostly correct 93%, Most Participation 80%, Other 0%. You can drop 1 polling day for an excused absence (Post to me on Piazza under "absence" for approval) . You may not complete polling questions outside of class.

**Reading/Video Quizzes.** Before most classes there will be a multiple-choice quiz posted related to the reading/videos for that class day. The quiz is due before class starts at 12:00pm. **NO late work accepted.**

**In Class Work.** There will be opportunities to work with others during class to practice what we are learning. These assignments will be submitted at the end of class. **You may complete in class group tasks late (by the next class) if you have an excused absence.**

**Case Assignemnts.** Instructions for each case assignment will differ and will be posted on Canvas.

**Attendance Policy.** I will take "attendance" by way of the Piazza polling questions. If you need to miss class, you should watch the recording of the class to see what you might have missed.

**Class Preparation and Participation Policies.** Being able to work with data, analyze it, and come up with business decisions is a "hands on" activity. We will be putting what you read in the textbook to use during class time so you need to be prepared to "dig in and work" during class. That means having your equipment ready (computer and software and text and internet) and being prepared to practice the materials for the day by having read the material beforehand.

**Extra Credit.** The syllabus reflects a fair and accurate assessment of your skills in the class. Under no circumstances will you be given the option to complete extra credit to make up for missing assignments and/or to raise your grade.

**GRADING STRUCTURE, SCALE, AND POLICIES:**

A: 93-100%; A-: 90-92.9%; B+: 87-89.9%, B: 83-86.9%; B-: 80-82.9%; etc.

Student performance will be evaluated and calculated on the items below:

Activity	Percentage
Preparation for Class	15%
Participation during Class	15%
Case Assignments	70%
<b>Total</b>	<b>100%</b>

**Class Schedule**

Week	Dates	Topics	Readings Before Class
1	Mar 30	Data Mining Process Data Wrangling and Exploration	DM4BA Ch 1-3
2	Apr 6	Dimension Reduction: Principal Components Analysis ClusterAnalysis	DM4BA Ch 4 DM4BA Ch 14
3	Apr 13	Evaluating Performance Prediction and Classification Methods: Multiple Linear Regression	DM4BA Ch 5 DM4BA Ch 6
4	Apr 20	Prediction and Classification Methods: k Nearest Neighbor Classification and Regression Trees	DM4BA Ch 7 DM4BA Ch 9
5	Apr 27	Prediction and Classification Methods: Logistic Regression	DM4BA Ch 10

### UNIVERSITY EXPECTATIONS, POLICIES, AND RESOURCES:

**Students with Disabilities.** A student who qualifies for academic accommodations because of a disability must submit a Faculty Letter to the instructor from the DU Disability Services Program (DSP) in a timely manner, so that the needs of the student can be addressed. Accommodations will not be provided retroactively, e.g., following an exam or after the due date of a project. DSP determines eligibility for accommodations based on documented disabilities. DSP is located in Ruffatto Hall, 1999 E. Evans Ave. (303-871-2278).

**University Expectations.** Please review the University Expectations on the Daniels College of Business syllabus webpage (<http://daniels.du.edu/university-expectations/>)

- University of Denver Honor Code
- Policy Concerning Official Communication
- Students with Disabilities
- Policy Concerning Religious Accommodations
- Policy Concerning Emergency Procedures
- Policy Concerning Conflicts of Interest, Including Gifts from Students