



BUSINESS ANALYTICS

PROFESSOR: Brian Phelan, PhD

EMAIL: bphelan2@depaul.edu

OFFICE: DPC 6209

OFFICE HOURS: Tuesdays 3:00-4:30 or by appointment

CLASSROOM: 14 E. Jackson, Rm 805

MEETING DATES: Mon. & Wed.

CLASS TIME: 10:10am – 11:40am

COURSE INTRODUCTION

Businesses are increasingly turning to data analytics to evaluate and improve business decisions. The ability to collect, analyze, and use data to inform important decisions is a critical skill for modern business students. This course will introduce students to the growing role of big data and the quantitative strategies to answer businesses questions. Students will analyze business cases in which data are used to help businesses make better decisions, exposing them to real world applications of analytics to address issues in accounting, economics, finance, management, and marketing. The course will also introduce students to some basic statistical techniques and the spreadsheet software, Excel, which students will use to analyze specific business problems.

LEARNING OBJECTIVES

- Understand the big picture of data analytics as a transformative force in modern business world.
- Define “big data” and its increasing use to support business decisions.
- Explore the ethical implications of collecting, storing, and using data on individuals.
- Apply the four questions of business analytics (what happened? Why did it happen? What might happen next? What should we do?) to different business scenarios and explore the descriptive, diagnostic, predictive, and prescriptive approaches to analytics.
- Use Excel to perform basic statistical operations and produce visual representations of business data.
- Apply the principles of business analytics to examples in marketing, finance, management and entrepreneurship, accounting, and economics
- Communicate the insights and applications identified within quantitative data

COURSE MATERIAL & FORMAT

There is no required textbook for this course. However, there are readings, videos, notes, and assignments posted on D2L. Each Module (week) has a dedicated folder on D2L. Module assignments are always due on **at 11:59pm** on the stated date.

EXCEL FOR DATA ANALYTICS

Students will be required to use Microsoft Excel, including its statistical functions. Excel is an important tool for doing data analytics in the business world. Because students will enter the course with varying levels of prior exposure to data organizing programs like Microsoft Excel, the first part of the course includes an introduction to Excel whereby students will complete a LinkedIn Learning certificate course in Excel. They will also complete two Excel exercises. In the second part of the course, students will use Excel to analyze data related to specific business disciplines.

*Note: You must use Excel in this course. No credit will be given for assignments submitted in Google Sheets or Apple Numbers.

ASSESSMENT OF STUDENTS

To assess the extent to which students have acquired the skills necessary for a strong foundation in business analytics, the course grading components are listed below.

| | |
|------------------------------|-------------|
| Attendance and Participation | 10% |
| Online Discussion Posts | 5% |
| LinkedIn Certificate | 5% |
| Excel Exercises | 10% |
| Midterm Exam | 20% |
| Group Case Work | 25% |
| Final Exam | 25% |
| Total Grade | 100% |

Grading Scale

Your final grade in the course will follow the traditional grading scale, which appears below:

A: 94-100%; A-: 90-93%; B+: 87-89%; B: 83-86%; B-: 80-82%; C+: 77-79%; C: 73-76%; C-: 70-72%; D+: 67-69%; D: 60-66%; F: <60%.

Attendance and Participation (10 Percent of Grade)

The class sessions are intended to be interactive, so attendance and participation are essential. For this reason, attendance is required and part of your grade in the course. Class participation – essentially, asking and answering questions and engaging in discussions – is also part of your grade. Your participation will make the course more fun, more engaging, and more educational. Here is the approximate grading rubric for Session Attendance and Participation:

| Attendance | Participation | Score |
|--------------------|---------------|-----------------|
| 95%-100% | Very Active | 10.0 |
| 95%-100% | Active | 9.5 |
| 95%-100% | Moderate | 9.0 |
| 95%-100% | Minimal | 8.5 |
| Attendance 90%-95% | | -0.5 from above |
| Attendance 70%-90% | | -1.0 from above |
| Attendance 50%-70% | | -2.0 from above |
| Attendance <50% | | -4.0 from above |

Notice that this does allow students to miss a class or two before being penalized. Please do not come to class if you are sick.

Discussion Posts (5 Percent of Grade)

During the first two weeks of the course, you are required to do a discussion post. Each post should be about 100-150 words (i.e. a paragraph), but a little longer is ok. For each post, you must also respond to two of your classmate's posts. Please be respectful of each other when you write responses to each other's posts. Please also avoid using ChatGPT and other generative AI models. This is a violation of DePaul's academic integrity policy and will not help you learn.

LinkedIn Certificate (5 Percent of Grade)

Part 1 of the course includes an introduction to Excel. By the end of week 2, students must submit a certificate of completion for the LinkedIn Learning course assigned in week 1. This is a 0/1 grade for whether a student completed the LinkedIn Learning course and submitted the certificate. It accounts for 5 percent of your grade and is essential content for the course as it will help you complete subsequent assignments. You can access the course [here](#).

Individual Excel Exercises (10 Percent of Grade)

There are two Excel exercises due at end of week 3 and week 4, students. These exercises give students practice using Excel and solidify what is learned from the LinkedIn Learning Certificate.

Midterm Exam (20 Percent of Grade)

There will be a midterm exam in class at the end of week 5 on May 1st. The midterm will include multiple choice, short answer questions, and an Excel exercise related to the material in the first half of the course. I will post a review sheet on D2L to help you prepare for the exam.

Group Case Work (25 Percent of Grade)

During weeks 6 to 10 of the course, we will learn more about analytics used in each business discipline: marketing, management, accounting, finance, and economics. There will be a business case associated with each discipline and students will work in groups of two or three on the cases. Instructions for the group case work will be provided on D2L. All of the submissions will include an Excel file with some form of work in Excel. Some of the submissions also will include some form of written document associated with the work in Excel. Your score on each case submission represents 5% of your final grade.

Final Exam (25 Percent of Grade)

There will be a final exam for the course to assess students' learning at the end of the quarter. It is scheduled to be held on 6/12/24 (in this classroom) at 8:30am. Like the midterm, the final exam will include multiple choice questions, short answer questions, an Excel exercise related to the material covered throughout the course. The format of the exam will be similar to the midterm, but there will be an increased emphasis on the Excel exercise and interpreting the analytics results.

ADDITIONAL EXPECTATIONS

Academic Integrity

Cheating and plagiarism will not be tolerated. Students are expected to adhere fully to the University's full Academic Integrity Policy. Please refer to your Student Handbook or visit Academic Integrity at DePaul University (<http://academicintegrity.depaul.edu>) for further details.

Timeliness

Late Homework Policy: It is very important to stay on top of your work and hand in your assignments on time. However, the quarter is a busy time with numerous competing interests. Additionally, even when one has the best intentions, things can randomly happen that prevent you from completing an assignment on time. Therefore, I will accept late homework assignments, but late homework assignments will be marked down 10 percent for each day they are late. Thus, if an assignment is due by 11:59pm on the 10th, any assignment submitted on the 11th will be automatically marked down 10 percent. If it's submitted on the 12th, it will be marked down 20 percent and so forth. This policy still incentivizes students to submit their homework on time, but allows students some flexibility if need be.

Exam Policy: The midterm and final exam will be held on the dates (and at the times) listed below. However, if you foresee a scheduling problem, please reach out to me as soon as you know and I may or may not accommodate the request. This will be decided on a case-by-case basis. Last minute requests are unlikely to be accommodated.

Center for Students with Disabilities

Students with disabilities that require additional time on exams or other efforts on my part, must work through the Center for Students with Disabilities (CSD) to arrange these accommodations. I will happily comply with all accommodations, but they must first be approved by CSD. You should take care of this during the first week of the course if you have not already made arrangements with CSD. Please also give me a heads up if you expect to be working with CSD on specific accommodations.

Contact: CSD; Loop Campus: Lewis Center 1420, Ph:312.362.8002.

Dean of Students

The Dean of Students Office (DOS) helps students navigate the university, particularly during difficult situations, such as personal, financial, medical, and/or family crises. DOS also has resources and programs to support health and wellness, violence prevention, substance abuse and drug prevention, and LGBTQ student services. They are the correct folks to contact for Absence Notifications, Late Withdrawals, Community Resource Referrals, or you just need someone to talk to (<http://studentaffairs.depaul.edu/dos>). Please reach out if you are in need of help. We are committed to your success as a DePaul student.

Respect

This course is designed for learning, which is best achieved by asking questions, thinking things through, and even making mistakes. Please treat your professor and all of your classmates with respect – we are all on our own journey of learning. If anyone has concerns about the behavior of other people in the class, please let me know right away.

BUS 102 Business Analytics Course Outline

Module Topics (Approximately a week each)

1. The Growing Role of Business Analytics (Week 1)
2. Big Data & Ethics (Week 2)
3. The Basic Tools of Business Analytics (Week 3)
4. Answering Business Questions with Data Analytics (Week 4 and 5)
5. Business Analytics for Marketing (Week 6)
6. Business Analytics for Management (Week 7)
7. Business Analytics for Accounting (Week 8)
8. Business Analytics for Finance (Week 9)
9. Business Analytics for Economics (Week 10)

| Module | Session Dates | Readings and Slides | Assignments | Assignments Due @ 11:59pm on D2L |
|-------------------|---------------|---------------------|---|----------------------------------|
| 1 | April 1 & 3 | Module 1 | Discussion Post | April 7 th |
| 2 | April 8 & 10 | Module 2 | Discussion Post & LinkedIn Learning | April 14 th |
| 3 | April 15 & 17 | Module 3 | Individual Excel Exercise | April 21 st |
| 4 | April 22 & 24 | Module 4 | Individual Excel Exercise | April 28 th |
| Midterm | May 1 | | Midterm Exam (in class) | |
| 5 | May 6 & 8 | Module 5 | Marketing Case Project | May 12 th |
| 6 | May 13 & 15 | Module 6 | Management Case Project | May 19 th |
| 7 | May 20 & 22 | Module 7 | Accounting Case Project | May 27 th |
| 8 | May 29 | Module 8 | Finance Case Project | June 2 nd |
| 9 | June 3 & 5 | Module 9 | Economics Case Project | June 9 th |
| Final Exam | June 12 | | Final Exam (in classroom, 8:30am - 10:45am) | |
| | | | | |

Please note: we do not have class on May 27th because of Memorial Day. Thus, the accounting case will be due on Monday 27th at 11:59pm (Monday instead of Sunday).