**Business 102**

**Business Analytics**

Winter 2025

DE PAUL UNIVERSITY

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| Thomas D. Donley | Office hours |
| 6215 DPC | Monday/Wednesday 2:30 – 3:30 |
| 312.362.8887 | And by appointment |
| tdonley@depaul.edu |  |

**COURSE CONTENT/OBJECTIVE:**

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 modem 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.

**PEDAGOGY:**

**Student success** in this class requires engagement with material **before** the corresponding scheduled meeting session as during class sessions the instructor will lecture AND lead Q&A sessions while working with students on assignment problems. This class is designed for student engagement – not passive attendance.

Course material is broken into weekly modules. Progression through the course requires students to: 1) complete the on-line material and readings **before** the weekly scheduled Monday class; 2) attend class for discussion and application of module content over the week; and 3) complete module homework assignments afterwards to “close the loop”.

**LEARNING OBJECTIVES:**

* Understand the big picture of data analytics as a transformative force in modern business world.
* Define “big data” and it’s 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

**REQUIRED COURSE READINGS:**

There is no required textbook for this course. However, there are readings, videos, notes, and assignments posted on D2L. You are expected to stay current with the information presented on this site. Lecture notes, presentations and homework are posted to the site.

**GRADING:**

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%**

Students are encouraged to work together on all assignments for the class save the exams. There is a clear distinction between working together and submitting another’s work as your own. Please make yourself aware of the standards of academic integrity at the university.

Both exams will be a combination of multiple choice, short essay and problem-solving using Excel. The exams will draw from the assigned readings as well as from lecture notes. Exams will be completed in class.

**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. You will be asked to document your attendance in the first ten minutes of class. All students will be allowed to miss two classes without penalty. Please do not come to class if you are ill.

**Discussion Posts (5 Percent of Grade)**

In each of the first two weeks of the course, you are required to do a discussion post. Each post should be approximately 100-150 words long (i.e. a paragraph). Additionally, you must also respond to two of you classmate’s posts. Professional and courteous standards are expected in all posts. Take the time to write your own posts – AI generated posts miss the point all together.

**LinkedIn Certificate (5 Percent of Grade)**

The course relies heavily on fluency in Microsoft Excel – an industry standard. Students must submit a certificate of completion for the LinkedIn Learning course assigned in week 1 by the end of week two (September 20). You can access the course [here](https://www.linkedin.com/learning/excel-essential-training-microsoft-365-17231101).

**Individual Excel Exercises (10 Percent of Grade)**

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

**Group Case Work (25 Percent of Grade)**

During weeks six to ten 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 submissions represents 5% of your final grade.

**Late Assignments**

It is very important to stay on top of your work and hand in your assignments on time. However, life happens. Therefore, late assignments will be accepted, but be marked down 10 percent for each day they are late. Missing an exam without a prearranged excuse or documented illness will result in a grade of zero for the exam.

**ADDITIONAL EXPECTATIONS/RESOURCES**

**Academic Integrity**

DePaul University is a learning community that fosters the pursuit of knowledge and the transmission of ideas within a context that emphasizes a sense of responsibility for oneself, for others and for society at large. Sanctions for violations will be determined by the instructor.

Violations include but are not limited to the following categories: cheating; plagiarism; fabrication; falsification or sabotage of research data; destruction or misuse of the university’s academic resources; alteration or falsification of academic records; and academic misconduct. Conduct that is punishable under the Academic Integrity Policy could result in additional disciplinary actions by other university officials and possible civil or criminal prosecution. Please refer to your Student Handbook or visit Academic Integrity at DePaul University ([http://academicintegrity.depaul.edu)](http://academicintegrity.depaul.edu/) for further details.

Note that a commonly accepted definition of plagiarism is when an author uses someone else’s words, ideas, or other material without acknowledgment. A closely related issue arises through the misuse of sources – basically carelessness or inadequate detail in accurately and fully citing other resources. If you are, and you should be, using or referencing other’s work in your assignments (including AI) be sure to attribute that work to them and cite the source correctly.

Help and details on citation and bibliographic styles can be found at the university writing center at: <https://condor.depaul.edu/writing/programs-writing-center.html>

**Technology Requirements**

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.

Please bring an internet-enabled device such as a laptop, tablet, or smartphone to class. You will use your device to access our class materials and/or engage with your peers. Please use your device for our learning activities and avoid any distractions during class. If you don’t have a device, please pair up with another student. DePaul offers [discounts on technology](https://resources.depaul.edu/demon-discounts/technology/Pages/default.aspx) from vendors such as Apple, CDW, and Dell.

**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.

**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)
4. Answering Business Questions with Data Analytics (Week 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)

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| Module | Session Dates | Readings  and Slides | Assignments | Assignments Due @ 11:59pm on D2L |
| 1 | Jan 6 & 8 | Module 1 | Discussion Post | Jan 12th |
| 2 | Jan 13 & 15 | Module 2 | Discussion Post & LinkedIn Learning | Sept. 15th |
| 3 | Jan 22 & 27 | Module 3 | Individual Excel Exercise | Sept. 22nd |
| 4 | Jan 29 & Feb 3 | Module 4 | Individual Excel Exercise | Sept. 29th |
| Midterm | Feb 5 or 10 |  | Midterm Exam (in class) |  |
| 5 | Feb 12 & 17 | Module 5 | Marketing Case Project | Oct. 13th |
| 6 | Feb 19 & 24 | Module 6 | Management Case Project | Oct. 20th |
| 7 | Feb 26 & Mar 3 | Module 7 | Accounting Case Project | Oct. 27th |
| 8 | March 5 & 10 | Module 8 | Finance Case Project | Nov 3rd |
| 9 | March 12 | Module 9 | Economics Case Project | Nov 10th |
| Final Exam | Wednesday March 19 |  | In class 8:30 to 10:45 |  |
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