

**Fermanian School of Business**

**BUS6025-2 Applied Data Analysis and  
Visualization**

**3 Units**

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**Summer 2024**

**May 6 – August 25**

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**Meeting Times:** Tuesdays 5:30 - 8:15 pm

**Meeting Location:** MV315

**Instructor:** Brad Reinard

**Email:** [breinard@pointloma.edu](mailto:breinard@pointloma.edu)

**Phone:** 408-375-9890 (text messages are okay)

**Office Hours:** by appointment and zoom

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## **PLNU MISSION**

**To Teach ~ To Shape ~ To Send**

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

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**FERMANIAN SCHOOL OF BUSINESS MISSION**

## **Character ~ Professionalism ~ Excellence ~ Relationships ~ Commitment ~ Innovation**

As members of a vital Christian community, we strive to provide high quality business programs that equip students to make a positive impact in their workplace and community by connecting purpose to practice. cultures.

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### **COURSE DESCRIPTION**

This course explores methods of applied data analysis, including capturing, identifying and analyzing data to inform decision making. Topics include an overview of statistical concepts, guidelines for effective data analysis, data visualization principles, and presenting and evaluating alternative solutions. Emphasis will be placed on designing and creating data visualizations to communicate with various stakeholders.

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### **INSTITUTIONAL LEARNING OUTCOMES**

1. **Learning, Informed by our Faith in Christ**  
Students will acquire knowledge of human cultures and the physical and natural world while developing skills and habits of the mind that foster lifelong learning.
  2. **Growing, In a Christ-Centered Faith Community**  
Students will develop a deeper and more informed understanding of others as they negotiate complex professional, environmental and social contexts.
  3. **Serving, In a Context of Christian Faith**  
Students will serve locally and/or globally in vocational and social settings.
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### **COURSE LEARNING OUTCOMES**

The student who successfully completes this course will be able to:

1. Select the appropriate data needed to solve organizational issues.
  2. Design principles and techniques for exploring and visualizing data.
  3. Analyze data to ensure it is properly captured and actionable.
  4. Apply data visualization principles and guidelines for effective analysis and presentation.
  5. Evaluate alternatives to optimize decision making within organizational constraints.
  6. Communicate persuasive, data-driven business insights.
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### **REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES**

## Resources:

1. Primary text is [Introduction to Business Analytics 1st Edition, McGraw Hill](#). The authors are Vernon J. Richardson and Marcia Weidenmier Watson.
2. In addition to the text, we will be using the McGraw Hill Connect Learning Environment. Please rent the Connect Learning Environment, which includes the eText by going [here](#).
3. For Tableau we will use Visual Analytics with Tableau by Alexander Loth. This book is available digitally for free from our Library at this link
4. Get a Tableau download for Students (free). Follow the instructions for the Desktop version. It is important that you get this loaded before week 2 begins.
5. Laptops will be essential for each class as Tableau, the Connect Learning Environment and the eText are only offered online. Unfortunately, if you are using a Chromebook, Tableau has very limited applications.
6. Feeds/Blog Subscriptions that are useful to be aware of:
  1. [Viz of the Day Links to an external site](#).by Tableau Software
  2. [The Functional Art Links to an external site](#).by Alberto Cairo
  3. [Perceptual Edge Links to an external site](#).by Stephen Few
  4. [Flowing Data Links to an external site](#).by Nathan Yau
  5. [Storytelling with Data Links to an external site](#).by Cole Nussbaumer

Supplemental and free: From our Library both these books can be used to understand Managerial Analytics and Visualizing Data with Excel:

<https://pointloma.on.worldcat.org/oclc/857068245>

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## COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a two-unit class delivered over eight weeks. It is anticipated that students will spend a minimum of 37.5 participation hours per credit hour on their coursework. For this course, students will spend an estimated 75 total hours meeting the course learning outcomes. The time estimations are provided in the module overviews.

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## ASSESSMENT AND GRADING

Exams are Open Book. All submitted homework and exams are to be an individual effort though group study is encouraged.

Grades will be based on the following:

Distribution of Points	
Course Assignments	Points
Leveling Module (pre-test & write-up)	5%
Leveling Module (post-test)	5%
Connect Assignments	15%
Homework Assignments	15%
Midterm Exam	15%
Lab Assignments	15%
Group Project and Presentation	15%
Final Exam	15%
<b>Total</b>	<b>100%</b>

Standard Grade Scale Based on Percentages				
A	B	C	D	F
A 93-100	B+ 87-89	C+ 77-79	D+ 67-69	F Less than 59
A- 90-92	B 83-86	C 73-76	D 63-66	
	B- 80-82	C- 70-72	D- 60-62	

**Students must complete the required program hours in the major (program) from Point Loma Nazarene University with a minimum grade of “C” in each course and an overall 2.00 grade point average.**

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## PROFESSIONAL STANDARDS

We have to live by our values in our class performance:

- Punctuality. Is the student on time for every class showing the Fermanian Value of Commitment?
  - Attendance. Are the University's policies of absences and attendance adhered to?
  - Professionalism per Fermanian Values. Is the student engaged in the material, using electronic resources properly, fully present in the class, and contributing to the body of knowledge we are developing as a class?
  - Excellence per Fermanian Values. Are questions, comments, positions and effort in line with standards of Excellence as stated in the Fermanian Values?
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## **INCOMPLETES AND LATE ASSIGNMENTS**

All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Incompletes will only be assigned in extremely unusual circumstances.

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## **SPIRITUAL CARE**

PLNU strives to be a place where you grow as a whole person. To this end we provide resources for our Graduate and Adult Degree Completion students to encounter God and grow in their Christian faith. At the Mission Valley (MV) campus we have an onsite chaplain, Rev. Gordon Wong, who is available during class break times across the week. If you have questions for, desire to meet or share a prayer request with Rev. Wong you can contact him directly at [mvchaplain@pointloma.edu](mailto:mvchaplain@pointloma.edu) or [gordonwong@pointloma.edu](mailto:gordonwong@pointloma.edu). Rev. Wong's cell number is 808-429-1129 if you need a more immediate response.

In addition, on the MV campus there is a prayer chapel on the third floor which is open for use as a space set apart for quiet reflection and prayer.

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## **PLNU COPYRIGHT POLICY**

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

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## **PLNU ACADEMIC HONESTY POLICY**

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas,

and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Academic Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

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## **PLNU ACADEMIC ACCOMMODATIONS POLICY**

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center ([EAC@pointloma.edu](mailto:EAC@pointloma.edu) or 619.849.2486). Once a student's eligibility for accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

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## **SEXUAL MISCONDUCT AND DISCRIMINATION**

Point Loma Nazarene University faculty are committed to helping create a safe learning environment for all students. If you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that help and support are available through the Title IX Office at [pointloma.edu/Title-IX](http://pointloma.edu/Title-IX). Please be aware that under Title IX of the Education Amendments of 1972, it is required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at [counselingservices@pointloma.edu](mailto:counselingservices@pointloma.edu) or find a list of campus pastors at [pointloma.edu/title-ix](http://pointloma.edu/title-ix)

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## **PLNU ATTENDANCE AND PARTICIPATION POLICY**

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report which may result in de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. See Academic Policies in the Graduate and Professional Studies Catalog for additional detail.

The second absence, other than University excused, may result in a 50 point, penalty, the third 100 points and the fourth 250 points. Please do not be late for class as a professional standard. Late arrivals can be considered absences.

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## **ASSIGNMENTS AT-A-GLANCE**