



School of STEM: Department of Mathematical, Information and Computer Sciences

CSC3031—Data Visualization and Communication in R

1 Unit

Spring 2025

T 12:25pm – 1:20pm

Rohr Science 295

Final Exam: Tuesday, 5/6, 1:30pm – 4:00 pm

INFORMATION	SPECIFICS FOR THE COURSE
Instructor title and name:	Dr. Carlson Triebold
Phone:	(619) 849-2968
Email:	ctriebol@pointloma.edu
Office location and hours:	Rohr Science 228, times posted on Canvas

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.

Course Description

Students will learn to create effective static and dynamic graphics for representing complex data sets. Students will learn to apply the principles of effective storytelling with data, and best practices in data design and communication.

Program and Course Learning Outcomes

1. Students will be able to apply their mathematical knowledge to solve problems.
2. Students will be able to use technology to solve problems.

3. Students will be able to write correct and robust software.
4. Students will be able to apply their technical knowledge to solve problems.

Required Texts and Recommended Study Resources

Students are responsible for having the required course textbooks prior to the first day of class.

All supplemental materials posted on this course site (including articles, book excerpts, or other documents) are provided for your personal academic use. These materials may be protected by copyright law and should not be duplicated or distributed without permission of the copyright owner.

1. *R in Action*, 3rd edition by Kabacoff
2. R from r-project.org
3. R Studio from rstudio.com

Assessment and Grading

Grading Distribution	Percent
R in the News	10
Homework and Labs	65
Final Project Preparation	5
Final Project	20
Total	100

Grades will be based on the following:

- **R in the News:** One of the best ways to learn what can be done in R is to follow R in the media. You may want to subscribe to some community groups on LinkedIn or follow relevant R hashtags on social media. I would suggest finding some that are relevant to your discipline. You should post a short summary of an interesting tool or project you have seen using R. The post should only be about a paragraph long. URLs where you found the original information is helpful. These are shaped as discussions, so you need to post, and you should look at and respond to at least one post.
- **Homework and Labs:** Learning a programming language requires hands-on experience, so the primary component of your grade will be from weekly labs and homework assignments. Late assignments will not be accepted. Your lowest assignment will be dropped.
- **Final Project:** You will have a final project that you will present either on the last day of class or during our scheduled final exam time. There will be steps leading up to the project during the semester, and the last five weeks of class will be dedicated to working on the project.

- **Late work will not be accepted.** Homework and lab assignments that are submitted late will be recorded with a score of zero. During the course, you may find that you are unable to submit homework on time due to a personal situation (for example, a personal or family illness, accident, business trip, etc.). This is why your lowest assignment will be dropped, as described above. There are no exceptions to this policy so please use your dropped assignment wisely.

Standard Grade Scale Based on Percentages

A	B	C	D	F
A [92.5-100]	B+ [87.5-90]	C+ [77.5-80]	D+ [67.5-70]	F [0-60]
A- [90-92.5)	B [82.5-87.5)	C [72.5-77.5)	D [62.5-67.5)	
	B- [80-82.5)	C- [70-72.5)	D- [60-62.5)	

Final Examination Policy

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the [Traditional Undergraduate Records: Final Exam Schedules](#) site. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for one of those exams. However, unless you have three (3) or more exams on the same day, no requests for alternative final examinations will be granted.

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.

Artificial Intelligence (AI) Policy

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc) to generate ideas, but you are not allowed to use AI tools to generate content (text, video, audio, images) that will end up in any work submitted to be graded for this course. If you have any doubts about using AI, please gain permission from the instructor.

PLNU Academic Accommodations Policy

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities in accordance with the Americans with Disabilities Act (ADA). Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an

accommodation has been determined, the EAC will work with the student to create an Accommodation Plan (AP) that outlines allowed accommodations. The EAC makes accommodations available to professors at the student's request.

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. Accommodations are not retroactive so clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes.

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. Students cannot assume that because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any special accommodations.

Additional Course Information:

Additional PLNU policies and practices that apply to this course can be found at the following link:

<https://docs.google.com/document/d/18i1pUoY0iCfB8w7JKxVvACQW309X-JRB/edit?usp=sharing&ouid=116164865489739533893&rtpof=true&sd=true>

Spring 2025

CSC 3031 Calendar

Week		Tuesday	Thursday
January	1	14 Statistics Labs 1 & 2	16
	2	21 Statistics Labs 3 & 4	23
	3	28 Statistics Labs 5 & 6	30
February	4	4 R Book Lab 2	6
	5	11 R Book Lab 3	13
	6	18 R Book Lab 4	20
	7	25 R Book Lab 5	27
March	8	4 R Book Lab 6	6
	9	11 Spring Break	13
	10	18 R Book Lab 7	20
	11	25 R Book Lab 8	27
April	12	1 Project Meeting #1	3
	13	8 Project Meeting #1	10 Project Meeting #1
	14	15 Project Meeting #2	17 Easter Break
	15	22 Project Meeting #2	24 Project Meeting #2
	16	29 Project Presentations	1
May	17	6 Project Presentations 1:30-4:00pm	8