Stat 231: Introductory Statistics

N. Paterno

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Contents

Work In Progress

This is the hub for Stat 231 at PLU with N. Paterno. Here you will find (a link to) the textbook, readings, homework, R labs & screencasts, video lessons and links to slides.

Chapter 1

Course Info

Instructor: Nick Paterno

Email: paternnj@plu.edu

1.0.1 Office Hours

Sign up here

Day	Hours
Monday	8:00 am - 2:30 pm
Tuesday	1:00 pm - 3:00 pm
Thursday	1:00 pm - 3:00 pm

Campus: Morken 261

Virtual: via Zoom or Google Meet.

1.0.2 Class Schedule

Day	Activity
Monday	New video lessons posted
Tuesday	Student hours
Wednesday	Student hours
Thursday	Code along/live coding sessions
Friday	Workshops

The first three days of the week are dedicated to lessons and homework from the textbook. Most weeks, last two days will be dedicated to statistical computing.

1.0.3 Class Materials

Textbook: OpenIntro Statistics, 4th Ed

1.0.3.1 Technology:

- Access to a word processing program.
- R and RStudio (These are free and we will get them setup during our first lab day)
- A graphing calculator, preferably a TI-83 or TI-84. A Casio FX-9750GII will also work (useful but *optional*).

1.1 Graded Items and Grading Guidelines

This section is a work in progress and will likely change

1.1.1 Weights of Grades:

Category	Weight
Homework	20%
Quizzes	25%
Labs	20%
Paper	10%
Final	25%
Total	100%

1.1.1.1 Homework:

All homework assignments will be online using WAMAP. For these assignments, you will have 3 attempts per question. After the third attempt you will be shown the answer. You can reattempt each question as many times as you'd like! Homework must be completed by 11:59 pm. You will not be able to complete the quiz until you have finished a module's homework assignments with a 50% or better! Your lowest 3 assignments will be dropped.

1.1.1.2 Quizzes:

Each module will have a quiz closely related to the homework. The quiz will be locked until you meet the prerequisites. Your lowest quiz will be dropped. If you miss a quiz it counts as your dropped score.

1.1.1.3 Labs:

We will have weekly coding sessions and workshops with the exception of weeks seven and fourteen. Your lowest two labs (workshop assignments) will be dropped.

1.1.1.4 Paper:

Each student will be required to write a paper about statistics in the media. Details will be given out in the second week of class via the Class Communications guidelines. The paper is due no later than the Last Day of Instruction (see Important Dates below). If there is a week where you don't have much work in your other classes or our class didn't take you long then you may want to knock out the paper early in the semester.

1.1.1.5 Final:

The final project will be partly in R and partly on WAMAP. It will be due no later than Friday, May 28.

1.1.2 Important Dates

Date	Event
4/2/2021	No Class: Good Friday
5/21/2021	Last Day of Instruction
5/24/2021-5/28/2021	Finals Week

Chapter 2

Readings & Resources

2.0.1 Textbook

Chapter 1: Sections 1.1 - 1.4

Chapter 2: Sections 2.1 - 2.2

Chapter 3: Sections 3.1 - 3.2, 3.4 - 3.5

Chapter 4: Sections 4.1, 4.3

Chapter 6: Sections 6.1 - 6.3

Chapter 7: Sections 7.1 - 7.3, 7.5

Chapter 8: Sections 8.1 - 8.4

2.0.2 Resources:

- R for Data Science: Data manipulation, visaulisation and modeling in R.
- ModernDive: Statistical Inference via R and the Tidyverse.

Chapter 3

Video Lessons

Disclaimer:

The videos below have the correct section written above the video with the length of the video in parenthesis. The video itself might refer to a different section number as the videos were created with a previous edition of the textbook.

3.1 Chapter 1

Section 1.1 (4:29)

Section 1.2 (4:14)

Section 1.3 (3:10)

Section 1.3 (3:37)

Section 1.4 (3:10)

3.2 Chapter 2

Section 2.1 (3:11)

Section 2.2 (4:59)

3.3 Chapter 3

Chapter 3 Overview (7:19)

Section 3.1 (19:52)

Section 3.1 (8:24)

3.4 Chapter 4

Section 4.1 (20:17)

Section 4.3 (8:46)

3.5 Chapter 6

Sections 6.1 and 6.2 (16:16)

Section 6.3 (14:46)

3.6 Chapter 7

Section 7.1 (7:21)

Section 7.1 (9:45)

Section 7.2 (9:03)

Section 7.3 (8:57)

Section 7.5 Part I (9:34)

Section 7.5 Part II (2:58):

Section 7.5 Part III (6:49):

3.7 Chapter 8

Section 8.1 (4:05)

Section 8.2 (6:48)

Section 8.3 (2:52)

Section 8.4 (4:20)

Chapter 4

R Labs

Each week we will have a code along/live code session as well as a workshop. The topic for the code along/live code will be the same for the workshop. Throughout the semester, I will use the same data set for as many weeks as possible, that way you can see how the data analysis process works for an entire project as opposed to isolated problems. Below is a tentative schedule of topics.

Week	Topic
One	Getting Started with R
Two	RMarkdown Crash Course
Three	Data Viz I
Four	Descriptive Statistics I
Five	Data Wrangling I
Six	Data Wrangling II
Seven	NO LAB
Eight	Data Viz II
Nine	Descriptive Statistics II
Ten	Inferential Statistics I
Eleven	Inferential Statistics II
Twelve	Linear Modeling I
Thirteen	Linear Modeling II
Fourteen	NO LAB

Notes: - There will not be a code along/live coding session for week one. - Week two's code along/live code will be a preview of some things you'll learn throughout the semester. - There will be a screencasted version of the code along/live coding sessions posted on this page on Thursday evenings.

4.1 Week One: Getting Started with R

Chapter 5

Final Words

We have finished a nice book.

Chapter 6

Announcements

All class announcements will be posted here and organized by module and date. There will be a mix of video and text announcements. You will be notified via email and text message (if you're signed up for REMIND) when a new announcement is posted.

6.1 Module One