

BUSN 5000

Weekly Schedule

Chris Cornwell

Spring 2024
(updated 27 Dec 23)

Class Room: Amos B010
Recitation Room: Ivester 007

Class Hours: TR, 935a and 1110a
Recitation Hours: R, 545p-645p

Deadlines

The **deadline** for submitting all homework and project assignments is **1159p** on the due date. Late submissions will not be accepted.

Week 0 :: Syllabus Day and Setup

Reading: [Healy, ch 2](#); BUSN 5000 R orientation and getting started guide

IRL: ["Brown Forman: How Posit allowed us to harness our data science and gain massive efficiencies"](#), Posit Customer Stories.

Week 1 :: Data Fundamentals

Reading: Bekes and Kedzi, ch 1; Bueno de Mesquita and Fowler, ch 1

IRL: ["How Bad Data Traps People in the US Justice System"](#), *Ted Talks*, April 2022.

Due: Homework 0 – **Mon, Jan 16**

Due: pre-Project exercise – **Fri, Jan 19**

Week 2 :: Beginning to Learn

Reading: Bekes and Kedzi, chs 2-3

IRL: ["What Can Uber Teach Us About the Gender Pay Gap?"](#), *Freakonomics Radio*, Episode 317.

Due: Homework 1 – **Mon, Jan 22**

Week 3 :: Models for Exploration

Reading: Bekes and Kedzi, ch 4; Bueno de Mesquita and Fowler, ch 2,4

IRL: ["What to Know About ChatGPT's New Code Interpreter Feature"](#), *New York Times*, 11 Jul 23.

Due: Homework 2 – **Mon, Jan 29**

Week 4 :: Making Inferences

Reading: Bekes and Kedzi, chs 5-6; Bueno de Mesquita and Fowler, ch 6

IRL: [“The Power of These Techniques Is Only Getting Stronger”](#), *Harvard Business Review*, March-April 2020.

Due: Homework 3 – **Mon, Feb 5**

Week 5 :: Measurement Error and Sample Selection

Reading: Bueno de Mesquita and Fowler, ch 16

IRL: [“Using internal CPS data to reevaluate trends in labor-earnings gaps”](#), *Monthly Labor Review*, August 2009.

Due: Homework 4 – **Mon, Feb 12**

Week 6 :: Confounding and the Bayesian Approach to Learning from Data

Reading: Bueno de Mesquita and Fowler, ch 15

IRL: [“Bayes theorem, the geometry of changing beliefs”](#), 3Blue1Brown. 22 Dec 19.

Due: Homework 5 – **Mon, Feb 19**

Week 7 :: Data Ethics and Part I Exam

Due: Project progress submission – **Mon, Feb 26**

PART I EXAM: **Thu, Feb 29 (in class)**

SPRING BREAK, MAR 4-8

Weeks 8-9 :: Regression fundamentals

Reading: Bekes and Kedzi, chs 7-10; Bueno de Mesquita and Fowler, ch 5; Angrist & Pischke, ch 2

IRL: [“The Data Coach”](#), *Against the Rules*, Season 2 Episode 5.

Due: Homework 6 – **Mon, Mar 25**

Week 10 :: Potential outcomes and causal inference

Reading: Bekes and Kedzi, chs 19-20; Bueno de Mesquita and Fowler, chs 3, 9-11; Angrist & Pischke, ch 1

IRL: [“Beyond Predictive Models: The Causal Story Behind Hotel Booking Cancellations”](#), *Medium*, 30 Sep 20.

Due: Homework 7 – **Mon, Apr 1**

Week 11 :: Regression discontinuity

Reading: Bueno de Mesquita and Fowler, ch 12; Angrist & Pischke, ch 4

IRL: [“Does Advertising Actually Work? Part I”](#), *Freakonomics Radio*, Episode 440.

Due: Homework 8 – **Mon, Apr 8**

Week 12 :: Difference in differences

Reading: Bekes and Kedzi, ch 22; Bueno de Mesquita and Fowler, ch 13; Angrist & Pischke, ch 5

IRL: [“Does Advertising Actually Work? Part II”](#), *Freakonomics Radio*, Episode 441.

Due: Homework 9 – **Mon, Apr 15**

Weeks 13-14 :: Introduction to machine learning

Reading: Bekes and Kedzi, chs 13-14; [“Machine Learning: An Applied Econometric Approach”](#), *Journal of Economic Perspectives*, Spring 2017.

IRL: [“In Defense of Zillow’s Besieged Data Scientists”](#), Medium, 16 Nov 21.

Due: Homework 10 – **Fri, Apr 26**

Weeks 16-17 :: Project submission and Part II Exam

Due: Project II submission – **Mon, Apr 29**

PART II EXAM (1110 section): Thu, May 2 at 800a (in class)

PART II EXAM (935 section): Tue, May 7 at 1200p (in class)
