

DATA-140



Spring 2023

WEEK 7 STUDY GUIDE

The Big Picture

After the midterm, we establish a principal concept central to variance calculations.

- *Covariance* helps calculate variances of sums and can be normalized to become *correlation*.
- General properties of variance and covariance help us calculate the variances of the main distributions.

Week At a Glance

Mon 2/27	Tue 2/28	Wed 3/1	Thu 3/2	Fri 3/3
	Midterm at lecture time	No sections	Lecture	Sections
HW 6 Due 5PM				
Lab 4 Due 5PM			HW 7 (due 3/6)	
Prepare for midterm		Skim Chapter 13	Work through Chapter 13	Work through Chapter 13

Reading, Practice, and Live Sessions

Book	Topic	Lectures: Prof. A.	Sections: GSIs	Optional Additional Practice
		Tuesday 2/28 Midterm	Wednesday 3/1 No section	
Ch 13	Covariance <ul style="list-style-type: none"> - 13.1-2 define covariance and establish its main properties - 13.3 covers the important special case of sums of independent variables - 13.4 covers variances of dependent sums - 13.5 compares dependent and independent sums via a <i>correction factor</i> 	Thursday 3/2 Variance of a sum: <ul style="list-style-type: none"> - Covariance and main properties - Sums of independent random variables - Handling dependence 	Friday 3/3 - Ch 13 Ex 1, 11, 15	Ch 13 - 2, 3, 4, 6, 13