

Hour	Unit	Topic	Teaching Methodology	Remarks
1	I	Introduction to Data Wrangling & its Importance	Whiteboard	
2	I	How Data Wrangling is Performed & Typical Tasks	Whiteboard	
3	I	Overview of Data Wrangling Tools	Whiteboard	
4	I	Introduction to Python & Python Basics	Whiteboard	
5	I	Reading Machine-Friendly Data: CSV, JSON, XML	Whiteboard	
6	II	Installing Python Packages for Parsing Files	Whiteboard	
7	II	Parsing Excel Files – Getting Started	Whiteboard	
8	II	Parsing PDFs – Problem Solving & Programmatic Approaches	Whiteboard	
9	II	Converting PDF to Text & Parsing PDFs with pdfminer	Whiteboard	
10	II	Acquiring and Storing Data – Databases Introduction	Whiteboard	
11	III	Relational Databases: Introduction to MySQL and PostgreSQL	Whiteboard	
12	III	Non-Relational Databases: NoSQL & When to Use Simple Files	Whiteboard	
13	III	Alternative Data Storage Options	Whiteboard	
14	IV	Why Clean Data? & Basics of Data Cleanup	Whiteboard	
15	IV	Identifying Values for Cleanup & Formatting Data	Whiteboard	
16	IV	Finding Outliers, Bad Data, and Duplicates	Whiteboard	
17	IV	Fuzzy Matching, RegEx Matching & Normalizing Data	Whiteboard	
18	IV	Saving Clean Data & Scripting the Cleanup Process	Whiteboard	
19	IV	Testing Cleanup with New Data	Whiteboard	
20	V	Data Exploration: Importing & Exploring Data	Whiteboard	
21	V	Table Functions & Joining Multiple Datasets	Whiteboard	
22	V	Identifying Correlations & Outliers	Whiteboard	
23	V	Creating Groupings & Analyzing Focused Data	Whiteboard	
24	V	Presenting Data: Visualizations & Chart Types	Whiteboard	

25	V	Time-Related Data, Maps, Interactive Visuals	Whiteboard	
26	V	Using Words, Images, Video & Illustrations in Data Presentation	Whiteboard	
27	V	Presentation Tools & Open Source Publishing Platforms	Whiteboard	
28	VI	Web Scraping: What to Scrape & How	Whiteboard	
29	VI	Analyzing Web Pages & Network/Timeline	Whiteboard	
30	VI	Interacting with JavaScript & In-Depth Page Analysis	Whiteboard	
31	VI	Getting Pages, Reading Pages with LXML & XPath	Whiteboard	
32	VI	Advanced Web Scraping & Browser-Based Parsing	Whiteboard	
33	VI	Screen Reading with Selenium & Ghost	Whiteboard	
34	VI	Spidering the Web: Building a Spider with Scrapy	Whiteboard	
35	VI	Crawling Whole Websites with Scrapy	Whiteboard	
36	All	Recap and Practice on Data Wrangling	Whiteboard	
37	All	Recap and Practice on Data Cleanup & Exploration	Whiteboard	
38	All	Recap and Practice on Web Scraping	Whiteboard	
39	All	Case Studies & Real-world Examples	Whiteboard	
40	All	Final Revision, Discussion & Q&A	Whiteboard	