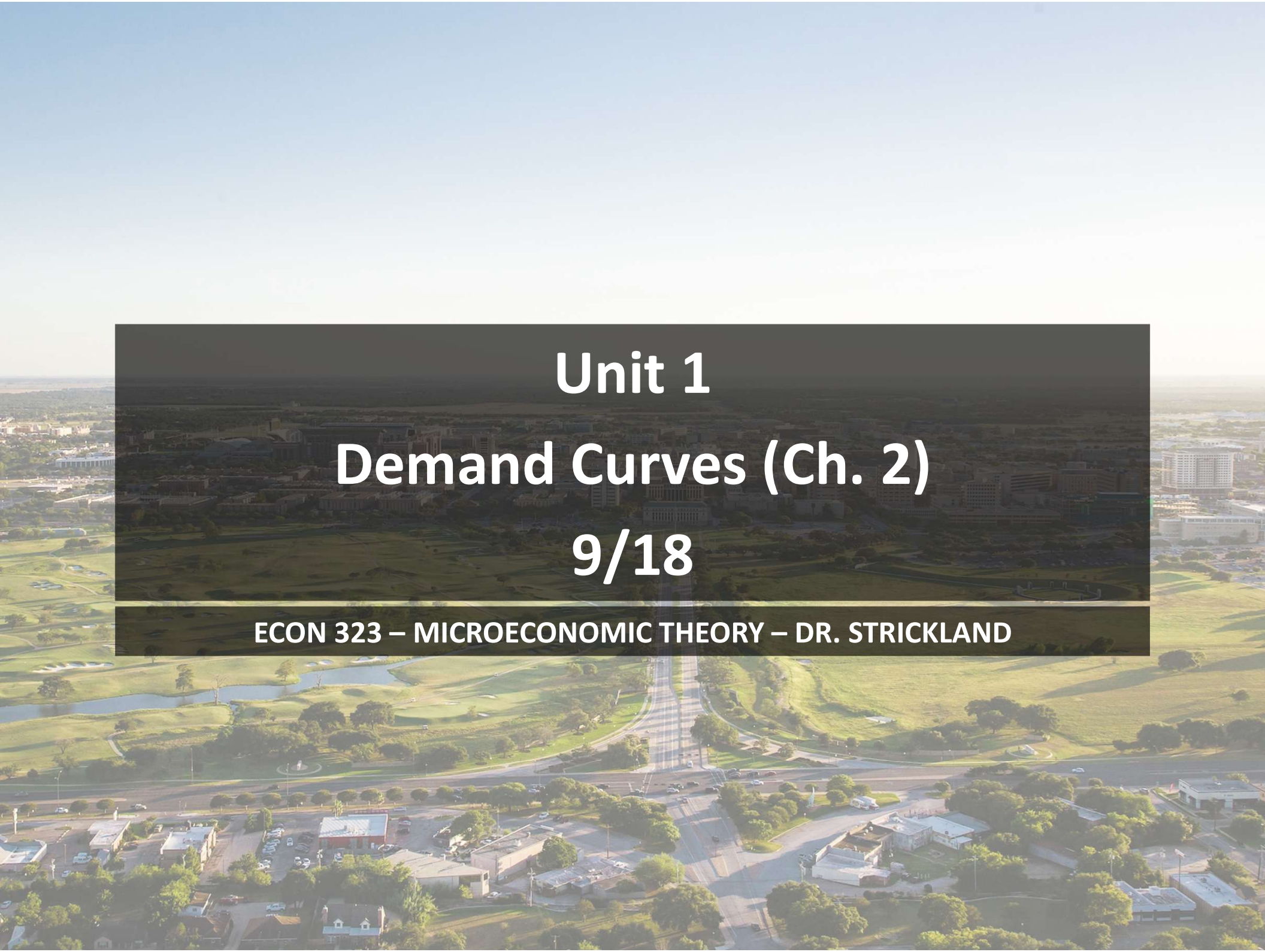


Unit 1
Demand Curves (Ch. 2)
9/18

ECON 323 – MICROECONOMIC THEORY – DR. STRICKLAND

Introduction

In this chapter, we'll look closer at the **demand curves** we derived in chapter 5.

- Determinants of demand
- Demand curves vs. inverse demand curves
- Elasticity

Demand

Demand: the consumer's desire to purchase a good/service

What matters for demand?

1. Price LAW OF DEMAND: P↑, Q↓ & P↓, Q↑
2. Income/wealth
3. Tastes/preferences
4. Prices of other goods
5. Number of consumers (if examining market demand)

Demand Curves

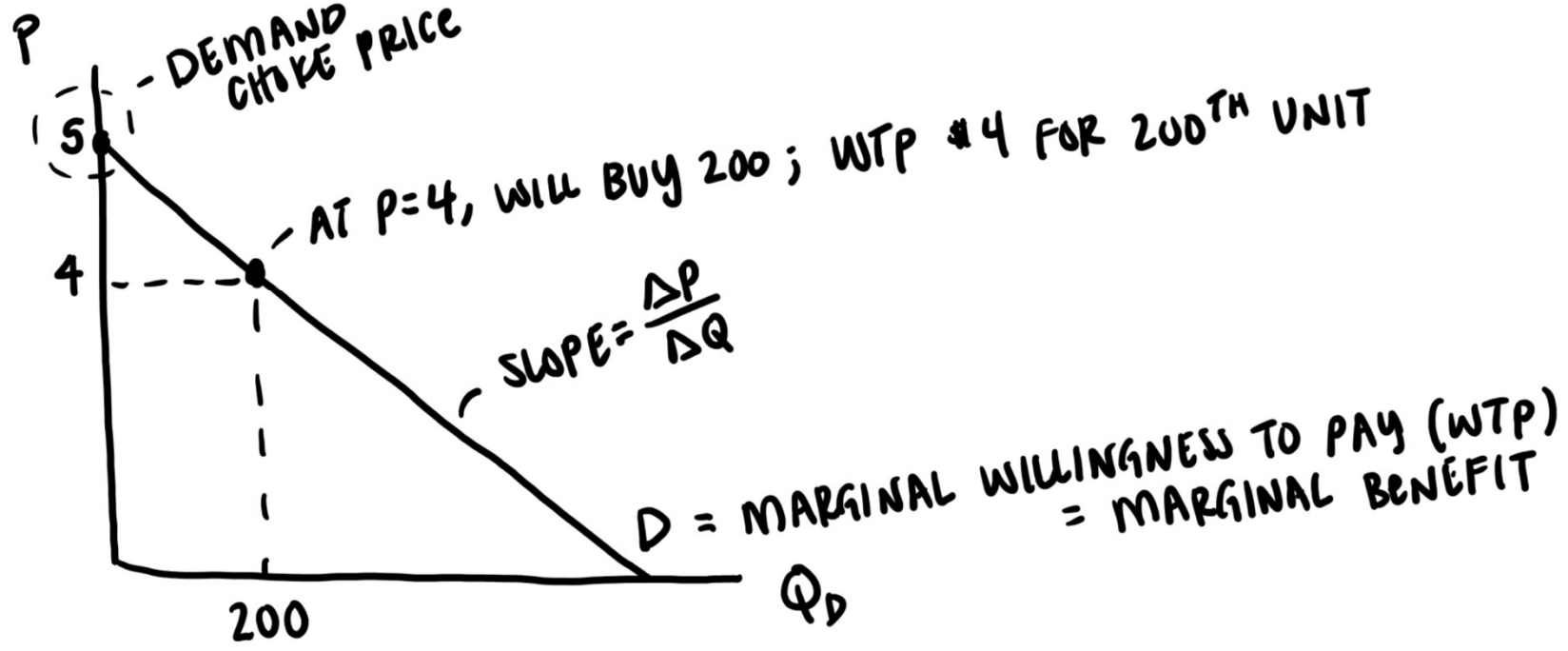
A **demand curve** isolates the effect of **price** on demanded QUANTITY

$y = mx + b$

- Economists plot the **inverse demand curve**

DEMAND CURVE: $Q_D = f(P)$ ex. $Q_D = 1000 - 200P$

INVERSE DEMAND CURVE: $P = f(Q_D)$ ex. $P = 5 - 0.005 Q_D$ * WHAT WE GRAPH



Price Elasticity of Demand

Price elasticity of demand: the percentage change in quantity demanded divided by the percentage change in price

$$\varepsilon_D = \frac{\%\Delta Q_D}{\%\Delta P} = \frac{\Delta Q_D / Q_D}{\Delta P / P} = \frac{\Delta Q_D}{\Delta P} \cdot \frac{P}{Q_D}$$

$\Delta P / P$: $\frac{\text{new} - \text{old}}{\text{old}}$

$\frac{P}{Q_D}$: old

* ELASTICITY BTWN 2 PRICES

$$\frac{\Delta Q_D}{\Delta P} = \frac{1}{\Delta P / \Delta Q}$$

$\frac{\Delta P}{\Delta Q}$ is SLOPE INVERSE DEMAND

$$\varepsilon_D = \frac{1}{\text{SLOPE}} \cdot \frac{P}{Q_D}$$

SLOPE OF INVERSE demand

* ELASTICITY AT A PRICE

Characterizing Price Elasticity of Demand

When price elasticity of demand is high…

- **Elastic** $|\varepsilon_D| > 1$
- Infinitely high? **Perfectly elastic** $|\varepsilon_D| = \infty$

When price elasticity of demand is low…

- **Inelastic** $|\varepsilon_D| < 1$
- Zero? **Perfectly inelastic** $|\varepsilon_D| = 0$

UNIT ELASTIC: $|\varepsilon_D| = 1$

$\varepsilon_D = \frac{\%\Delta Q_D}{\%\Delta P} \Rightarrow$

A $1\%\ \Delta P \Rightarrow \varepsilon_D\ \%\ \Delta Q_D$

e.g. $\varepsilon_D = -2$