Introduction and Overview

EC 311 - Intermediate Microeconomics

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Introduction

Motivation

What to Expect from the Course?

- This course involves a mix of math and economic theory
- I recognize most of, if not all, are here for the requirement in your program so I aim to make it as relevant and interesting as possible

What do we do with Microeconomics?

> It sets up a lot of the foundational work for cool research that we may not consider as Economics

Motivation

Some Cool Research Ex.

- Does international trade impact political polarization in developing countries?
- How does the city you live in affect your economic mobility: Evidence from Japanese Internment Camps
- Estimating the child labor-education returns and trade-offs in Tanzania
- What explains the gender pay gap?
- Does globalization increase or reduce the gender wage gap: Looking at Vietnam

Motivation

Why are we here studying microeconometrics?

> **Its a requirement**
>
> **It will help develop a healthy way of logically thinking about problems**

So Why Should You Care?

Consider this to be the very basics of applying market research. Which is incredibly important for many differnt employers:

- Government regulators
- Product strategists and marketers
- Corporate lawyers
- Venture capital firms
- Anyone interested in a market

Motivation

Employers need to estimate what will happen to a market if/when prices, techonology, consumer tastes, or policies changes

But other than finding a job, we can apply these concepts to our own lives

Consider your single most valuable resource: **Time**

- As a students, you can spend it many different ways:
  - Studying and going to lectures
  - Exercising or completing a hobby
  - Socializing
  - Staring at the wall

Motivation

Firms essentially face the same challenges of efficiently allocating time and other resources

They make choices on:

- Employee pay
- Investing in R&D
- Purchasing intermediate inputs
- Increasing marketing/advertising expenditures

About Me (An Economist in Training)

I'm from **San Jose, Costa Rica**

- I'm a 3rd year PhD Student
  - It is a 5 year program so I'll likely graduate with some of you
- My current research is focused on international trade, development, and political economy
- I like to read mystery/spy novels so if you have recommendations let me know!

Syllabus

Class Information

- **Schedule:** Tuesday & Thursday in Straub 145
- **Office Hours:** Thursday from 12:00 to 14:00
- **Attendance** is important to your learning experience
  - A lot goes on in the class that may be hard to understand just from lecture slides

Lectures

- They will be dynamic, with me asking general questions and expecting answers from you
- There will be in-class problems for you to complete and which will be a part of your participation grade
- On ocassion I will use the whiteboard to make graphs or to answer math questions

Expectations

Prerequisites

- EC 201: Intro to Microeconomics
- MATH 111:
  - MATH 241: Calculus 1 (Recommended but not required)
  - I'll give you a crashcourse in what we'll need from calculus in the next lecture

Expectations

What to Expect from the Course

- The course involves a healthy mix of math and economic theory
  - The math is relatively straightforward, but it requires a good grasp on the theory to properly interpret it
- More importantly than committing the theory to memory, the goal is to think like an economist
  - There is a set logic in the theory that we will see and it should lead to predictable conclusions

Assignments

Achieve Online Learning

- You **MUST** register for the course through Achieve
- This is where you will complete your homework
- It also gives you access to the digital version of the textbook
- The course code is **xu5rmk**
- Your lowest homework grade will be dropped
- 1 day grace period (with 5% penalty) $\rightarrow$ no submissions allowed after that

Canvas Quizzes

- Weekly quizzes that will help you get accustomed to how test questions will look
- Roughly 10 questions with only one attempt allowed
- Your lowest homework grade will be dropped
- No late submissions allowed

Grades

Homework

- Achieve Homework (20%)
  - **8 Assignments**
  - **Due on Mondays of week after they are assigned at 11:59 pm**
    - The last assignments will be due on the Saturday before Finals week
- Canvas Quizzes (15%)
  - **7 Quizzes**
  - **Due on Mondays of week after they are assigned at 11:59 pm**

Exams

- Midterm (30%)
  - **Week 6 - Thursday at 08:00**
- Final (30%)
  - **March 20 - Wednesday at 08:00**

Participation

- I'll randomly select someone to share their answer to lecture problems
  - Being correct is not important, but rather that you attempted it
- Everyone will eventually be called upon so you cannot escape it

Grade Notes - There will most likely be a curve applied to your course grade - Because of this, what truly matters is the class distribution, not your raw score - If you are above the class average, your doing great

What Do We Do With Economics?

Foundations

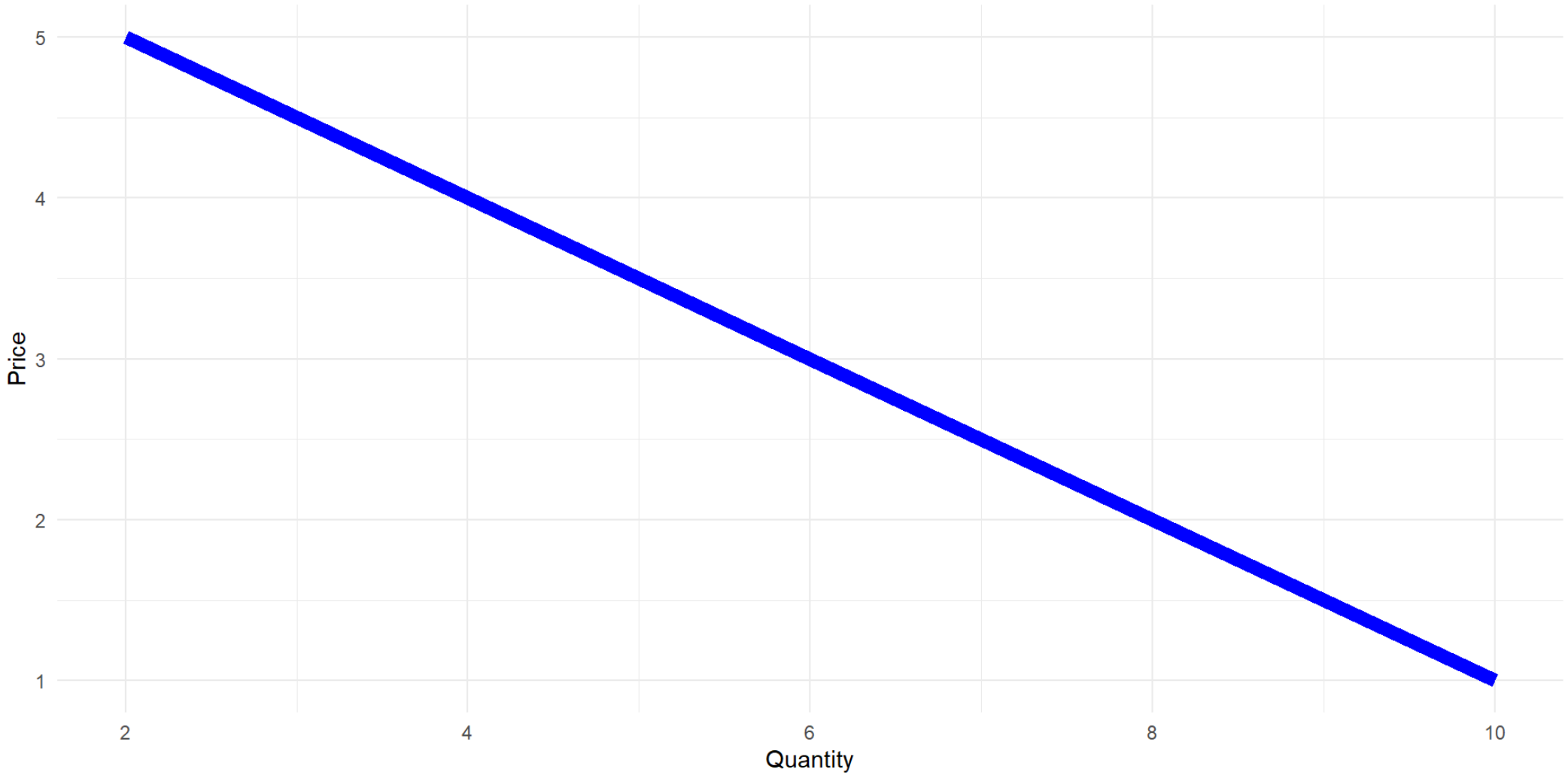
What we will be learning in this course will seem simplistic and reductive to the world we actually observe

Before we jump into Intermediate Microeconomics, we need to refresh our memories of more basic concepts from EC 201:

- Demand
- Supply
- Economic Assumptions

Basics Review

Demand



Demand

- **Demand** is the **QUANTITY** of a good that consumers want at a given **PRICE**

- The **Demand Curve** shows the **RELATIONSHIP** between **PRICES** and **QUANTITY** of a good for consumers

We will make the distinction between **Individual Demand** and **Market Demand**

Individual Demand: Single Consumer (One Person)

Market Demand: All potential consumers (Everyone participating in the market)

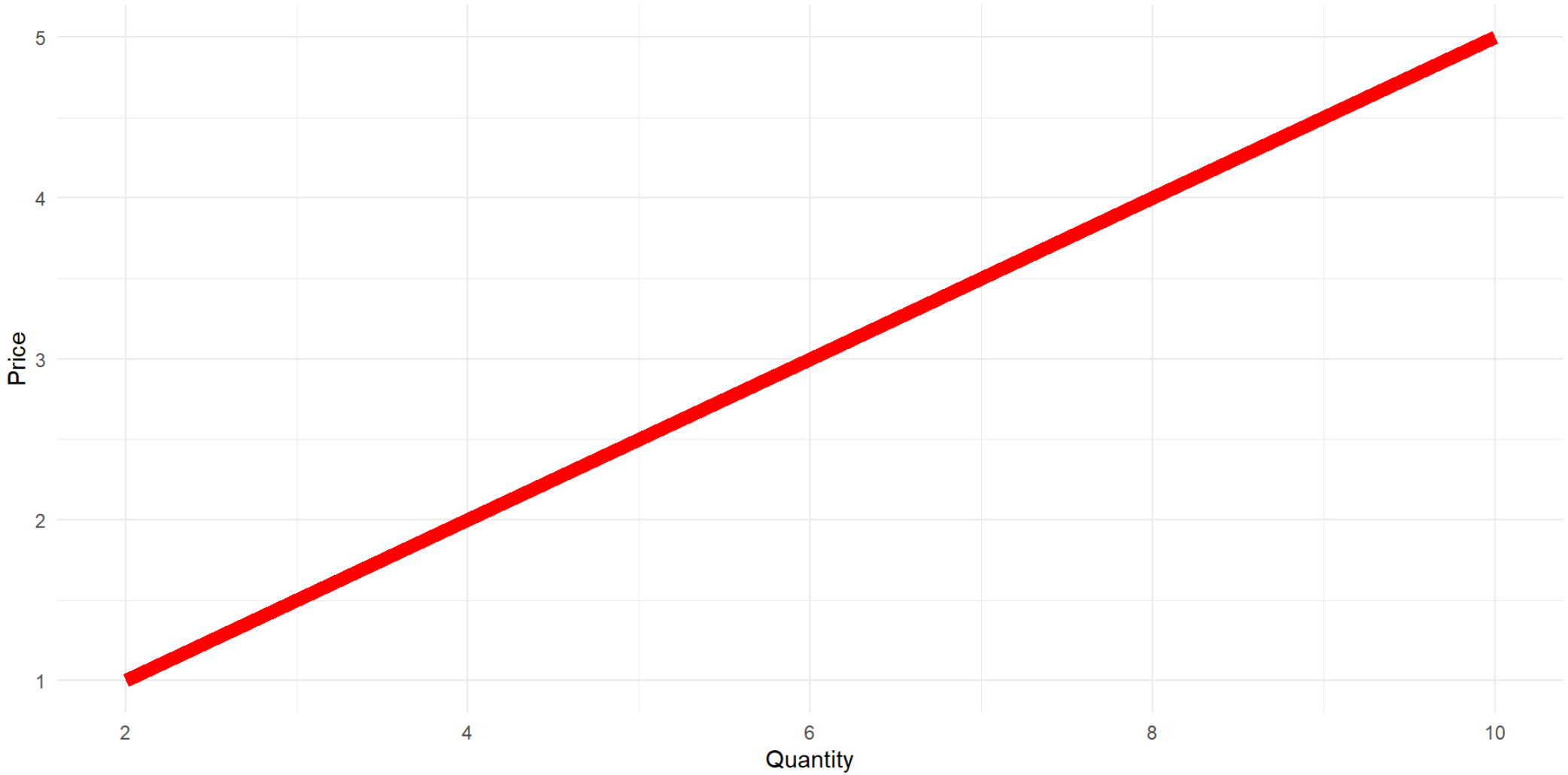
Note: The first half of the course will be about demand and how we can find it for individuals and then for an entire market

Demand

Some **Factors** that can affect demand are:

- Number of Consumers
- Changes to Income
- Consumer Preferences (Tastes)
- The Price of Other Goods
  - Complements
  - Substitutes

Supply



Supply

- **Supply** is the **QUANTITY** of goods available for sale at a given **PRICE**
- The **Supply Curve** shows the **RELATIONSHIP** between **PRICES** and **QUANTITY** of a good for producers

We also make the distinction between **Individual Supply** and **Market Supply**

Individual Supply: A Single Producer (One Firm)

Market Supply: All potential producers (All firms that are participating in the market)

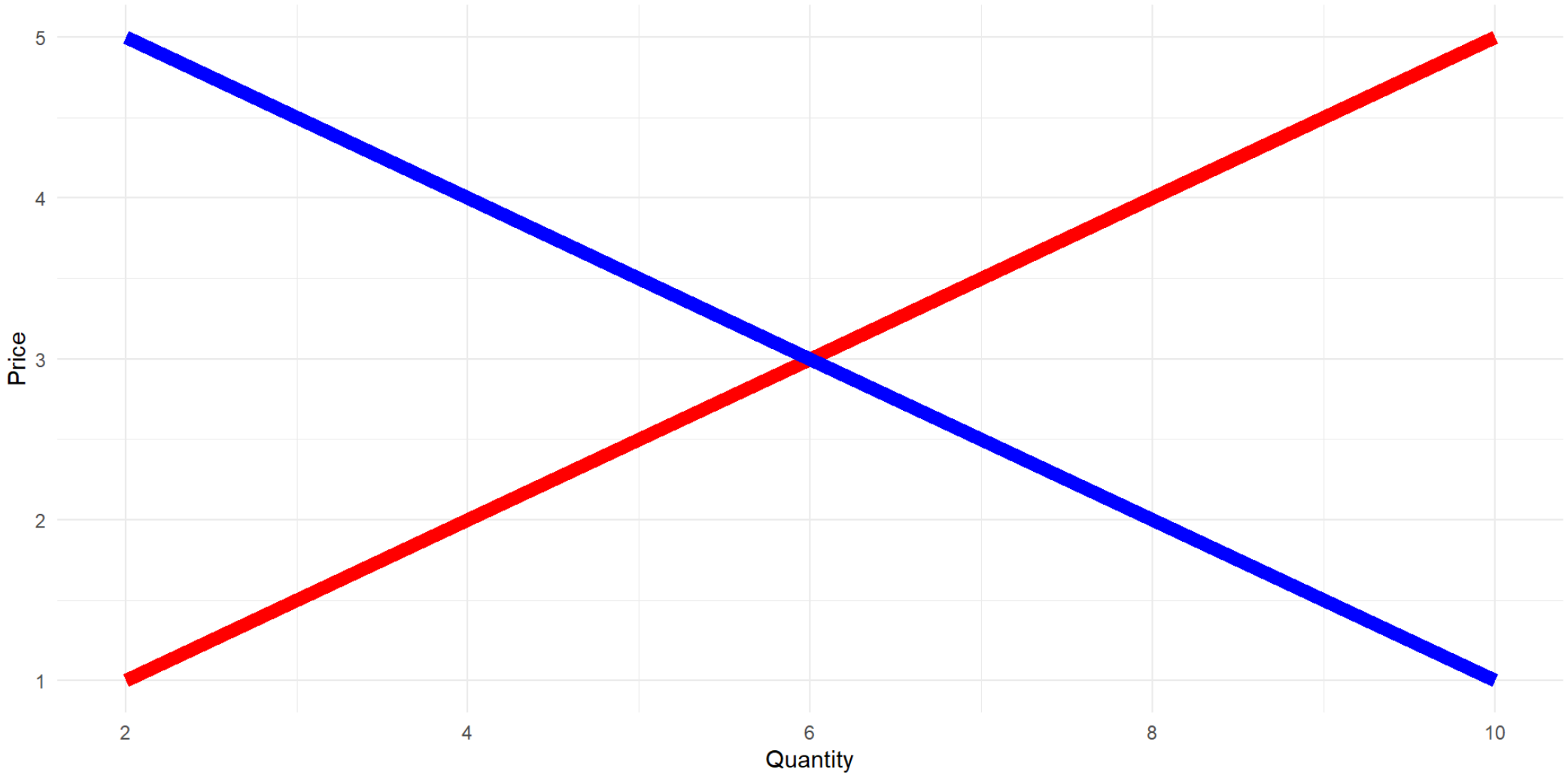
Note: The second half of the course will deal with how producers make their decisions

Supply

Some **Factors** that may affect supply are:

- Production Costs (Cost of Raw Materials, Technology, etc.)
- Number of Sellers (Number of firms in the market)
- Producers outside options

Supply & Demand



Put together they give us this classic graph

Supply & Demand

Where these two are **equal to each other** (where they cross) we say it is the **market equilibrium**

The third part of the course will be about variations to the **classic market equilibrium**

- What happens when the market is deep (has many producers) **(Perfect Competition)**
- What happens when the market is shallow (only one producer) **(Monopoly)**
- What about other forms of competition where firms have some market power but not total market control? **(Imperfect Competition)**

Models

We can use all these to make very complex models of what we think the world looks like

But to begin, we need to develop the basics of:

- What does **Demand** look like?
- What does **Supply** look like?
- What form of **Competition** are we in?

> Once we put all of these together we are modeling a market. With a model, you can begin to analyze the effects of changes to **Model Inputs** on **Model Outputs**

Assumptions

We will work with models you have seen before and some new ones that are classified as “classical economics”

These require certain assumptions in order to simplify the results:

- Assume that individuals are **Rational and Self-Interested**
- Assume that markets have **No Externalities and Asymmetric Information**

Assumptions

These assumptions help make things simple and work to set a benchmark of sorts

They are often good approximations of the real world but are often not exact

We use these fundamental pieces of classical economics and build on top of them

Note: I'm not attempting to describe the way the world works exactly, but rather give you a strating point for future endeavors

Last Tool You Will Need

We will need calculus

It turns out that intermediate micro is fundamentally inseparable from multi-variate calculus

- I cannot show you where a demand curve comes from without using **(a tiny bit)** of calculus

So the second thing we will do is discuss the math you will need in order to follow the material