About the Class

The objective of the course is to:

- Develop an analytical framework to
- explain growth, unemployment and inflation,
- and see how government policies (monetary and fiscal) affect these things.
Some Important issues in macroeconomics

• Why are there recessions? How can markets fail this way?

• Can a government stimulus package or Federal Reserve monetary policy do something about it?

• How hard will it be to find a job when you graduate?
Class Logistics

Text: Mankiw, 9th edition with Launchpad

Website (available through smartsite) has syllabus, lecture outlines, old exams...

Requirements: Econ 1A,B and Math 16A (21A)

Grading: 5 homework assignments, 2 midterms, and a comprehensive final.

No rescheduling, but can drop either/both midterms

Section attendance is required – starts this week (calculus review).
Launchpad

Launchpad is needed to complete your homeworks.

Two ways to get it:

1) Purchase online directly from publisher (see syllabus for web address; see course webpage for details). Includes access to e-book text.

2) Purchase physical book from UCD bookstore, with code to register for Launchpad.

Use your UC Davis email in registration, so that homework grades can be identified.

In case of problems, call tech support: 1-800-936-6899 before you contact TA or professor.
Intermediate Macroeconomic Theory

Topic 1: Introduction
(Mankiw chapter 1)
Learning objectives

This chapter introduces you to

• the issues macroeconomists study

• the tools macroeconomists use
Three main variables we will study:

1) Gross domestic product, output (GDP)
2) Unemployment rate
3) Inflation in the cost of living (CPI)
GDP: Observations

1. Long-term upward trend.
2. Short-run disruptions in the trend: recessions.
U.S. Unemployment Rate
(% of labor force)

Great Depression

World War I

World War II

Oil price shocks

Financial crisis
Unemployment: Observations

1. Unemployment always positive.
2. Fluctuations related to GDP: unemployment higher during recessions.
Inflation: Observations

1. Inflation can be negative.
2. Often high when GDP high, but not always (see 1970s).
How we learn Economics: **Models**

...are simplified versions of a more complex reality

irrelevant details are stripped away
Example of a model:
The supply & demand for new cars
Example of a model: The supply & demand for new cars

• **Variables:**
  
  \( Q^d \) = quantity of cars that buyers demand
  
  \( Q^s \) = quantity that producers supply
  
  \( P \) = price of new cars
  
  \( Y \) = aggregate income
The demand for cars

demand equation: \[ Q^d = D(P, Y) \]

consumer demand related to the price of cars and aggregate income.
Digression: Functional notation

- **General functional notation** shows only that the variables are related:

\[ Q^d = D(P, Y) \]

A list of the variables that affect \( Q^d \)
Digression: Functional notation

• **General functional notation** shows only that the variables are related:

\[ Q^d = D(P, Y) \]

Examples:

1) \[ Q^d = D(P, Y) = 60 - 10P + 2Y \]

2) \[ Q^d = D(P, Y) = \frac{0.3Y}{P} \]
The market for cars: demand

demand equation:

\[ Q^d = D(P, Y) \]

relationship between quantity demanded and price, other things equal.
The market for cars: supply

supply equation:

\[ Q^s = S(P) \]

relationship between quantity supplied and price, other things equal.
The market for cars: equilibrium

- **Price of cars**
- **Quantity of cars**

**Equilibrium price**

**Equilibrium quantity**
The effects of an increase in income:
The effects of an increase in income:

demand equation:

\[ Q^d = D(P, Y) \]

An increase in income increases the quantity of cars consumers demand at each price…

…which increases the equilibrium price and quantity.
Exogenous Variables → Model → Endogenous Variables
Endogenous vs. exogenous variables:

• The values of **endogenous** variables are determined in the model.
• The values of **exogenous** variables are determined outside the model: the model takes their values & behavior as given.
• In the model of supply & demand for cars,

  endogenous: $P, Q^d, Q^s$

  exogenous: $Y$
A Multitude of Models

No one model can address all the issues we care about. For example,

- If we want to know how a fall in aggregate income affects new car prices, we can use the S/D model for new cars.
- But if we want to know *why* aggregate income falls, we need a different model.
A Multitude of Models

• So we will learn different models for studying different issues (unemployment, inflation, growth).

• For each new model, you should keep track of
  – its assumptions,
  – which variables are endogenous and exogenous,
  – which questions it can help us understand,
Prices: Flexible Versus Sticky

- **Market clearing**: an assumption that prices are flexible and adjust to equate supply and demand.

- In the short run, many prices are **sticky**---they adjust only sluggishly

- Example: labor contracts that fix the nominal wage for a year or longer
Prices: Flexible Versus Sticky

• The economy’s behavior depends partly on whether prices are sticky or flexible:

• If prices are sticky, then demand won’t always equal supply. This helps explain
  – unemployment (excess supply of labor)
  – the occasional inability of firms to sell what they produce

• Long run: prices flexible, markets clear, economy behaves very differently.
Outline of the class:

• **Classical and Growth Theory** (ch. 2-9)
  How the economy works in the *long run*, when prices are flexible and markets work well.

• **Business Cycle Theory** (ch. 10-14,18)
  How the economy works in the *short run*, when prices are sticky. What can policy makers do when things go wrong.

• **Microeconomic Foundations** (Chaps. 16,19)
  Incorporate features from microeconomics on the behavior of consumers. (if time permits)