Outline of the Course

- **Part A: Money and Financial Institutions**
  - What is Money? Money and the macroeconomic indicators
  - Interest rates: behavior, risk and term structure
  - Brief introductory discussion of the stock market

- **Part B: Money supply**
  - Structure of the central bank, Federal Reserve System
  - Money supply process
  - Monetary policy: tools and targets

- **Part C: Monetary theories and policy issues**
  - IS-LM model
  - AD-AS model
  - Newer models

Core Principles of Money and Banking

- Time has value
- Risk requires compensation
- Information is the basis for decisions
- Markets set prices and allocates resources
- Stability improves welfare
The Financial System

- Money
  - Make payment and store wealth
- Financial instruments
  - Transfer resources from one to another
- Financial markets
  - Buy and sell financial instruments efficiently
- Financial institutions (or intermediaries)
  - Provide a variety of financial services
- Monitoring Bodies: Central banks
  - Monitor the financial system and stabilize the economy
Money

- Money is anything that is generally accepted as
  (a) payment for goods and services
  (b) repayment of debts

- Note
  - Credit card is not money
  - Currency in your wallet → too narrow
  - Wealth → too broad
  - Income → a flow, money is a stock

Digression: Stocks and Flows

**Flow**: over a period of time

**Stock**: at a point in time
Functions of Money

Medium of exchange

- Transaction cost: costs related to exchange
- Barter economy: high transaction costs
- Monetary economy: more efficient
  - Lowers transaction costs
  - Promotes specialization and division of labor

Functions of Money

Unit of Account

- Measure of value
  - Comparison
- Number of relative price too large
  - In a barter economy a market with 100 good will have 4950 relative prices
  - For 1,000 goods 499,500 prices.
Functions of Money
Store of Value

- Today’s income can be spent tomorrow
- Money as a store of value
  - Not the best store of value
  - Why do people hold money?
    Answer: Liquidity
- Money and inflation

Evolution of the Payment System

- Money is usually
  - Standardized
  - Widely accepted
  - Divisible
  - Easy to carry
  - Not deteriorate easily
- Commodity money
- Fiat money
- Checks
- Electronic payment: substitute for checks
  - Automatic bill payment, Paypal, etc.
- E-money: substitute for cash
  - Debit card, Stored-value card (Smart card), E-cash
Measuring Money

| Source: http://www.federalreserve.gov/releases/h6/hist |

| Money = Money supply |
| Money supply affects |
| - Business cycles |
| - Aggregate price level |
| - Inflation |
| - Interest rates |

| Money supply allows policy makers (the central bank) to influence the economy |
| - U.S. Central Bank (Federal Reserve System, “the Fed”) |

| Money and the Macroeconomy |

| Value as of December 2004 (Billions) |

| M1 = Currency | 697.4 |
| + Traveler’s checks | 7.6 |
| + Demand deposits | 327.8 |
| + Other checkable deposits | 329.2 |
| Total M1 | 1,362.0 |

| M2 = M1 |
| + Small-denomination time deposits and repurchase agreements | 813.1 |
| + Savings deposits and money market deposit accounts | 3,529.2 |
| + Money market mutual fund shares (noninstitutional) | 712.7 |
| Total M2 | 6,417.0 |
Money and Business Cycle

- Shaded areas represent Recessions.
- Every recession has been preceded by a decline in the rate of money growth.
- Note: Not every decline in money growth has been followed by a recession.

Money and Price Level

A positive relation between money and price level.
Money Growth and Inflation

Positive correlation between average money growth rates and average inflation rates (across countries).

Money Growth and Interest Rates

- Positive correlation between money growth rates and interest rates in 1960’s and 1970’s
- Relationship breaks down in 1980’s
Growth Rates of Fed’s Money Aggregates