

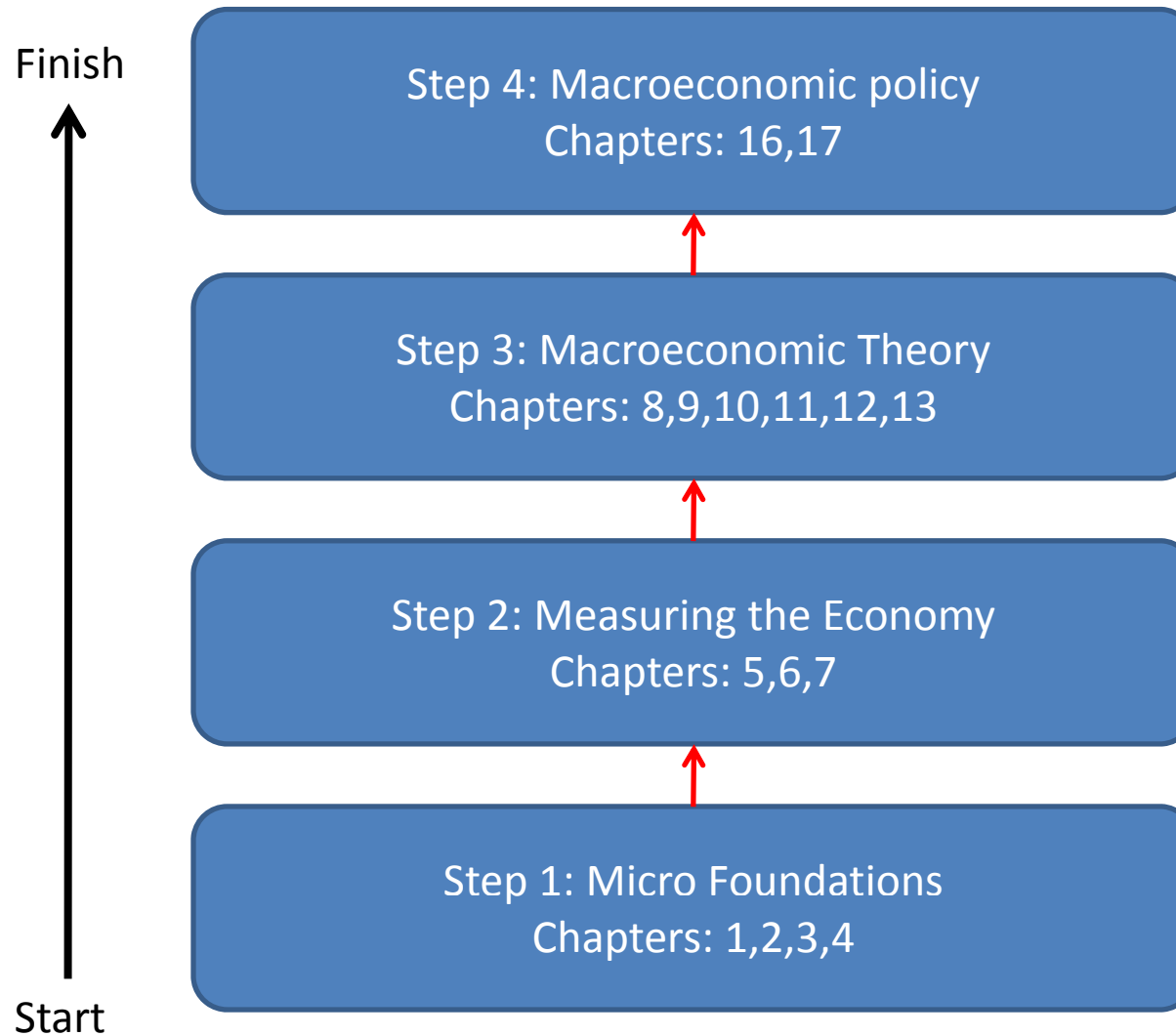
**ECON 100 – 02, Spring 2010**  
**Course Summary and Study**  
**Guide For the Final**

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# ECON 100: The Big Picture

- In these notes I provide a brief summary of the entire course and make suggestions about how to study for the final.
- The next diagram shows the progression of the course material, starting with **micro foundations**, and ending with **macroeconomic policy**.

# ECON 100: The Big Picture



# I. Micro Foundations

- The first step of the course is an introduction to economics in general, and the language of economics – **micro foundations**.
- We defined economics as the study of how people deal with **scarcity**.
- Because of scarcity, people face tradeoffs and need to make **choices**. Students need to understand the concepts of **rational choice, opportunity cost, cost benefit analysis, choices at the margin** and **incentives**.

# I. Micro Foundations

- In order to visualize the concept of scarcity, we introduced in chapter 3 the **Production Possibilities Frontier (PPF)**.
- With the help of the PPF, we were able to distinguish between **attainable, efficient, and unattainable** production points. The concept of efficiency is one of the most important concepts in economics. Regardless of what your political views are, and how you think the national cake should be distributed, everybody can agree that waist is a bad thing.

# I. Micro Foundations

- Another key concept in economics, which we also illustrated with the help of the PPF, is **opportunity cost**. Unfortunately, many non-economists do not realize that to get more of something, you need to give up something else. We all want more education, health, personal and national security, etc. But in this class we stressed that providing more health means that we need to give up some education – an example of opportunity cost of health.

# I. Micro Foundations

- The PPF was also used to illustrate **economic growth** as expansion of the PPF, and how people and countries can gain from trading with each other.
- Students need to distinguish between **absolute advantage** and **comparative advantage**. It is the presence of comparative advantage that allows people and countries to gain from trading with each other.
- Students need to know the connection between opportunity cost and comparative advantage and be able to calculate opportunity costs from tables and graphs.
- Students also need to be able to illustrate economic growth by drawing PPF's.

# I. Micro Foundations

- Perhaps the most useful model in most undergraduate courses in economics is the model of **Demand and Supply** (ch. 4). The model is used to understand the forces that determine prices of goods and services.
- Students need to be able to use the model of demand and supply to illustrate the effects of certain events on the **equilibrium** price and quantity.
- In order to be able to use the model, it is necessary that students distinguish between **movements along** a given demand or supply curve, and **shifts of** the curves.

# I. Micro Foundations

- The model of demand and supply was also used to understand the effects of market interventions, such as **price floor** and **price ceiling**.
- To summarize, the micro foundations chapters provide essential tools for students to grasp the macroeconomic theories studied later in the course. The key word here is **foundations**, and it means that without them it is impossible to build the rest of the course.

## II. Measuring the Economy

- In analogy to the way doctors measure the blood pressure and temperature of patients, economists need to measure things about the economy, in order to establish its condition.
- The most important item that macroeconomists measure is **GDP** (ch. 5). Students are expected to be able to calculate the **nominal GDP** using (i) **the expenditure approach** and (ii) **the income approach**.

## II. Measuring the Economy

- Students need to be able to calculate the **real GDP** using the **base year approach**.
- Students need to know the limitations of **real GDP per capita** as a measure of standard of living in an economy.

## II. Measuring the Economy

- The second item that we learned how to measure in an economy is the **Consumer Price Index (CPI)** (ch. 6). The CPI is used for measuring the cost of living, and besides its importance for the macroeconomy, it is very important for your daily life.
- For example, the CPI is used for salary negotiations. When you are asking your boss for a salary increase, your argument can be supported by data of the CPI, to show that the **purchasing power** of your salary has declined.

## II. Measuring the Economy

- Students need to know how to calculate **inflation** based on data about the CPI.
- Students need to be able to compare dollar values at different dates, with the help of the CPI. In other words, you need to be able to **adjust for inflation**.
- Students need to distinguish between **nominal interest rate** and **real Interest rate** and between **nominal wage rate** and **real wage rate**.

## II. Measuring the Economy

- We conclude the measurement part of the course by measuring things in the labor market (Ch. 7). The two main labor market indicators are: (i) **unemployment rate** and (ii) **labor force participation rate**.
- Students need to be able to calculate these indicators, based on data from labor markets.
- Students also need to know the types of unemployment: (i) **frictional**, (ii) **Structural**, (iii) **Seasonal** and (iv) **cyclical**, and be able to give examples for each type.

# III. Macroeconomic Theory

- After measuring key indicators about the economy (output, prices, unemployment), we ask “what forces determine them?”. Chapter 8 presents what is called **the classical theory**, which explains the **potential** real GDP and the **natural rate of unemployment**.
- The model consists of two components: (i) **production function**, and (ii) **labor market**.

# III. Macroeconomic Theory

- Students are expected to use the production function graph and the labor market graph together, to illustrate the impact of certain events on the potential real GDP, wages and employment. We applied this model in class to analyze the impact of the devastating earthquake in Haiti on the Haitian economy.

# III. Macroeconomic Theory

- A key concept that students need to understand from this chapter is the natural rate of unemployment. When economy is at **full employment**, there is still some unemployment – the natural unemployment.
- Students need to know what factors determine the level of natural unemployment rate in a country (e.g. demographics, unemployment benefits).

# III. Macroeconomic Theory

- Chapter 9 studies in more depth the sources of **economic growth** – a subject we briefly discussed in ch. 3.
- Students need to be able to calculate the growth rate of real GDP and real GDP per capita, and be familiar with the **rule of 70**.
- The formulas used to calculate growth rates are the same for any variable whose growth rate you calculate. Therefore, they can be applied to calculate the growth rates of your savings, the growth rates of revenues of a company you work for, or the growth rate of greenhouse emissions that industries around the world create.

# III. Macroeconomic Theory

- Using a production function (from ch. 8) to model the production of output, we list the sources of growth. We conclude that growth in **standard of living** can be generated only by growth in labor productivity. Growth in the size of population, on its own, cannot lead to growth in standard of living.
- We briefly survey the 3 main theories of economic growth: (i) Malthusian, (ii) Neoclassical, and (iii) New Growth Theory.

# III. Macroeconomic Theory

- Students need to be able to use the model of production function and labor market (introduced in ch. 8) to illustrate the impact of an increase in labor productivity on potential output and wages.
- Ch. 9 ends the discussion about economic growth with a discussion of government policies, that are known (based on empirical studies) to be beneficial for growth.

# III. Macroeconomic Theory

- Chapter 10 makes tries to explain the role of financial markets in the macro economy. Ch. 8,9 assume that the level of physical capital in the economy is fixed, but in the real world capital is augmented through **investment**.
- Ch. 10 explains how people make **saving decisions**, how firms make **investment decisions**, and how financial markets coordinate these decisions.

# III. Macroeconomic Theory

- Ch. 10 presents the model of the **loanable funds market**, which illustrates the role played by the financial system in coordinating saving and investment decisions.
- Student need to be able to use the model of the loanable funds market to illustrate how certain events (e.g. changes in income, expected profit, government spending) affect the real interest rate and the equilibrium level of saving and investment in the economy.

# III. Macroeconomic Theory

- Students are expected to be able to compute the present value of a stream of payment and understand how to apply the present value calculations to determine the profitability of a particular investment project.
- Students need to be able to illustrate with the loanable funds market, the impact of government budget deficit on the equilibrium real interest rate and equilibrium saving and investment. This analysis depends crucially on whether **Ricardo-Barro** effect holds or not.

# III. Macroeconomic Theory

- Chapters 11, 12 and my notes on the banking crisis, present the theory of **money and banking**.
- Students need to know what is money and what roles it plays in the economy.
- Students need to know the basics of the banks **balance sheets**, and understand how banks use **leverage** to make profits, and how **toxic assets** can lead to **balance sheet insolvency** (based on my notes “Banking Crisis”).

# III. Macroeconomic Theory

- Students need to know what is the **Federal Reserve System (Fed)**, and what are its responsibilities.
- Students need to know how the Fed, together with the commercial banks, determine the **money supply** in the economy. In particular, the students need to be able to calculate the impact of (i) open market operations, and (ii) **changes in the required reserve deposit ratio**, on the money supply.
- In order to do that, students need to know well the concepts of **monetary base**, **money supply** and **money multiplier**.

# III. Macroeconomic Theory

- Chapter 12 studies how the monetary policy affects the **nominal interest rates** and **inflation** in a country.
- Students need to be able to use the model of the **money market** to analyze the **short run** impact of monetary policy on the nominal interest rates.
- Students need to be able to use the **quantity theory of money**, to analyze the **long run** impact of monetary policy on inflation rate.
- Students need to be familiar with the different types of costs that inflation brings on the economy.

# III. Macroeconomic Theory

- Chapter 13 presents the AS-AD model, used to study the **business cycles**. Recall that we already developed in ch. 8, a theory of **potential output**. Chapter 13 adds a theory of how output can deviate from the potential (or full employment, or long run).
- Students need to be able to use the AS-AD model to explain how certain events can lead to a recession (e.g. higher oil prices). We also use this model in chapters 16, 17 to analyze the impact of fiscal and monetary policies on the economy

# IV. Macroeconomic Policy

- Equipped with enough theory about how the macroeconomy works, we are ready to embark on discussion of macroeconomic policy: (i) **fiscal policy** (ch. 16) and (ii) **monetary policy** (ch. 17).
- Students need to know the basics of government **budget surplus and deficit**, and the **national debt**.

## IV. Macroeconomic Policy

- Students need to be able to illustrate with the AS-AD model the impact of **demand side fiscal policy**.
- Students need to know the difference between **automatic fiscal policy** and **discretionary fiscal policy**.
- Students need to be able to illustrate with the production function and labor market model, the impact of **supply side fiscal policy**.

# IV. Macroeconomic Policy

- The last chapter in the course, ch. 17, discusses the **monetary policy** of the Fed and other central banks.
- Students need to be able to illustrate graphically the impact of monetary policy on the economy. In particular, students need to use the graphs of the (i) **money market**, (ii) **loanable funds market**, and (iii) **AS-AD**, to illustrate how the Fed can boost the economy during recessions and how it can “cool down” the economy at times of inflation.
- There are many other interesting issues regarding monetary policy, discussed in ch. 17, but we might not get enough time to explore them.