

UCLA-ALIGNED COURSE FIELD NOTES

ECON 2

Principles of Economics: Macroeconomics

National income, growth, inflation, unemployment, policy, trade, and the open economy

How these notes are written. I wrote each chapter the way I wish the material had been explained the first time: the real idea, the point where I usually get stuck, the simplest mental model that still stays honest, and a worked decision instead of a polished answer appearing from nowhere. Every chapter closes with practice and a fully written solution. If a sentence sounds impressive but does not help me solve or explain something, it does not belong here.

Daniel Mastick

Curriculum map, working notes, practice, and solutions

Course map

Week	Core thread	What should be solid by the end
1	Measuring output, income, and prices	Reconstruct the model, work an application, test its assumptions, and explain the result in ordinary language.
2	Long-run growth and productivity	Reconstruct the model, work an application, test its assumptions, and explain the result in ordinary language.
3	Unemployment, inflation, and labor markets	Reconstruct the model, work an application, test its assumptions, and explain the result in ordinary language.
4	Aggregate demand and aggregate supply	Reconstruct the model, work an application, test its assumptions, and explain the result in ordinary language.
5	Money, banking, and the financial system	Reconstruct the model, work an application, test its assumptions, and explain the result in ordinary language.
6	Monetary policy and transmission	Reconstruct the model, work an application, test its assumptions, and explain the result in ordinary language.
7	Fiscal policy, deficits, and public debt	Reconstruct the model, work an application, test its assumptions, and explain the result in ordinary language.
8	Trade, exchange rates, and international accounts	Reconstruct the model, work an application, test its assumptions, and explain the result in ordinary language.
9	Integration studio	Combine several chapters in one case, preserve their assumptions, and reconcile the result across representations.
10	Cumulative review	Retrieve the full course map from memory and solve mixed problems without chapter labels.

Scope anchor: <https://catalog.registrar.ucla.edu/course/2025/ECON2?year=2025>. The sequence is aligned to the official catalog description and expanded into a practical ten-week study plan.

How I would use this packet

Treat each numbered section as one chapter. Read the formal explanation, pause at the student interpretation, and see whether the easy version still says the same thing. Rework the example without looking, then cover the solution in the chapter practice box. The cumulative set at the end is deliberately mixed: knowledge becomes durable when I have to choose the tool instead of being told which chapter I am in.

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CHAPTER 1 Measuring output, income, and prices

The idea

GDP measures final domestic production and can be computed by expenditure, income, or value added. Real GDP removes price change; price indexes, inflation, and per-capita measures answer different questions and omit important welfare dimensions.

Rebuild the chapter from first principles

The claim I need to own is this: GDP measures final domestic production and can be computed by expenditure, income, or value added. Real GDP removes price change; price indexes, inflation, and per-capita measures answer different questions and omit important welfare dimensions. I do not count that as learned just because the sentence looks familiar. I should be able to name the objects, state what changes and what stays fixed, recover the rule from the definitions, and explain why the result is allowed.

The move

My working sequence

1. **Translate.** Rewrite the prompt in the language of measuring output, income, and prices. List the known quantities, the unknown, the units or types, and any hidden constraint.
2. **Choose.** State the theorem, model, algorithm, accounting rule, or physical law before substituting values. This is where I make the assumption visible.
3. **Execute.** Work one justified step at a time and keep intermediate state readable enough that I can audit it later.
4. **Verify.** Check a boundary case, sign, unit, invariant, order of magnitude, or alternative derivation. Then translate the result back into an ordinary sentence.

Details I would refuse to skip

- **Definitions:** I should be able to define every technical noun in the chapter without using that same noun in the definition.
- **Assumptions:** I write the condition that makes the method legal beside the method itself. A correct procedure under the wrong assumptions is still a wrong answer.
- **Representation:** I move freely among words, equations or code, a diagram, and a small numerical example. If one representation disagrees with another, that disagreement is useful evidence.
- **Failure modes:** I keep the nearest counterexample in mind: the boundary where the rule changes, the invariant breaks, or the model stops matching reality.
- **Communication:** My final answer names what the result means and what it does not establish. I do not let notation do the explanatory work for me.

Sanity check

Closed-note check. Can I teach measuring output, income, and prices on a blank page, derive or reconstruct its main rule, work a fresh example, and diagnose a deliberately broken solution? If I can only recognize the finished work, I am not done.

How this chapter connects

I read this chapter as the bridge from the course foundations to long-run growth and productivity. The earlier material supplies the language and constraints; this chapter adds a new reasoning move; the later material asks me to use that move without being told its name. That connection matters because exams and real projects mix chapters on purpose.

The full working model

- **Core claim.** GDP measures final domestic production and can be computed by expenditure, income, or value added.
- **What moves.** Real GDP removes price change; price indexes, inflation, and per-capita measures answer different questions and omit important welfare dimensions.
- **What keeps the answer honest.** The model becomes useful only when I can apply measuring output, income, and prices to an unfamiliar case and defend the assumptions.
- **Mastery standard.** I can define the objects, rebuild the rule, work a fresh case, compare alternatives, and diagnose a broken solution without relying on recognition.

How I actually think about it

I ask what a statistic counts, what it leaves out, and whether the comparison is nominal, real, total, or per person.

The easy version

GDP measures final domestic production and can be computed by expenditure, income, or value added.

Worked example

Question. Nominal GDP rises 8 percent while the GDP deflator rises 3 percent. Approximate real growth.

Walkthrough. Real growth is approximately 5 percent; exactly, divide 1.08 by 1.03 and subtract one, giving about 4.85 percent.

Common miss

The fastest way to get this chapter wrong is to use the visible procedure without naming its assumption, units, time period, reference group, or boundary. I put that condition beside the work and verify the result independently.

Solved chapter practice

Practice 1. Nominal GDP rises 8 percent while the GDP deflator rises 3 percent. Approximate real growth.

Solution. Real growth is approximately 5 percent; exactly, divide 1.08 by 1.03 and subtract one, giving about 4.85 percent.

Practice 2. Explain measuring output, income, and prices to a classmate using one definition, one concrete example, one assumption, and one failure mode.

Solution. Begin with the core claim above, use the worked case as the concrete example, state the condition highlighted by the warning, and choose a failure where that condition does not hold. A complete explanation connects all four pieces instead of listing them.

Mastery practice A. Reconstruct measuring output, income, and prices from a blank page. Include the central definition, the governing rule, one required assumption, and one boundary case.

Solution. Start from the blue idea box, but rewrite it in my own words. Identify the objects and state, name the rule before using it, copy the relevant assumption from the details audit, and choose a boundary where that assumption becomes equality or fails. A complete solution explains why each part belongs; a list of vocabulary is not enough.

Mastery practice B. A classmate gets a polished-looking answer to a measuring output, income, and prices problem but never states a model or checks the result. Write the shortest useful review of that solution.

Solution. I would ask four concrete questions: What exactly are the inputs and desired output? Which rule licenses the main step? Which assumption could invalidate it? Which independent check supports the conclusion? If the answer cannot survive those four questions, I treat the numerical or verbal result as unverified.

CHAPTER 2 Long-run growth and productivity

The idea

Living standards depend on output per person, driven by physical and human capital, technology, institutions, and resource allocation. Diminishing returns limit capital deepening, while innovation and productivity sustain long-run growth.

Rebuild the chapter from first principles

The claim I need to own is this: Living standards depend on output per person, driven by physical and human capital, technology, institutions, and resource allocation. Diminishing returns limit capital deepening, while innovation and productivity sustain long-run growth. I do not count that as learned just because the sentence looks familiar. I should be able to name the objects, state what changes and what stays fixed, recover the rule from the definitions, and explain why the result is allowed.

The move

My working sequence

1. **Translate.** Rewrite the prompt in the language of long-run growth and productivity. List the known quantities, the unknown, the units or types, and any hidden constraint.
2. **Choose.** State the theorem, model, algorithm, accounting rule, or physical law before substituting values. This is where I make the assumption visible.
3. **Execute.** Work one justified step at a time and keep intermediate state readable enough that I can audit it later.
4. **Verify.** Check a boundary case, sign, unit, invariant, order of magnitude, or alternative derivation. Then translate the result back into an ordinary sentence.

Details I would refuse to skip

- **Definitions:** I should be able to define every technical noun in the chapter without using that same noun in the definition.
- **Assumptions:** I write the condition that makes the method legal beside the method itself. A correct procedure under the wrong assumptions is still a wrong answer.
- **Representation:** I move freely among words, equations or code, a diagram, and a small numerical example. If one representation disagrees with another, that disagreement is useful evidence.
- **Failure modes:** I keep the nearest counterexample in mind: the boundary where the rule changes, the invariant breaks, or the model stops matching reality.
- **Communication:** My final answer names what the result means and what it does not establish. I do not let notation do the explanatory work for me.

Sanity check

Closed-note check. Can I teach long-run growth and productivity on a blank page, derive or reconstruct its main rule, work a fresh example, and diagnose a deliberately broken solution? If I can only recognize the finished work, I am not done.

How this chapter connects

I read this chapter as the bridge from measuring output, income, and prices to unemployment, inflation, and labor markets. The earlier material supplies the language and constraints; this chapter adds a new reasoning move; the later material asks me to use that move without being told its name. That connection matters because exams and real projects mix chapters on purpose.

The full working model

- **Core claim.** Living standards depend on output per person, driven by physical and human capital, technology, institutions, and resource allocation.
- **What moves.** Diminishing returns limit capital deepening, while innovation and productivity sustain long-run growth.

- **What keeps the answer honest.** The model becomes useful only when I can apply long-run growth and productivity to an unfamiliar case and defend the assumptions.
- **Mastery standard.** I can define the objects, rebuild the rule, work a fresh case, compare alternatives, and diagnose a broken solution without relying on recognition.

How I actually think about it

My shorthand for this chapter is: my shorthand for this chapter is: compounding makes a small persistent growth-rate difference more important than one dramatic quarter.

The easy version

Living standards depend on output per person, driven by physical and human capital, technology, institutions, and resource allocation.

Worked example

Question. Use the rule of 70 for a country growing 2 percent annually.

Walkthrough. Real output per person doubles in roughly 35 years because 70 divided by 2 is 35.

Common miss

The fastest way to get this chapter wrong is to use the visible procedure without naming its assumption, units, time period, reference group, or boundary. I put that condition beside the work and verify the result independently.

Solved chapter practice

Practice 1. Use the rule of 70 for a country growing 2 percent annually.

Solution. Real output per person doubles in roughly 35 years because 70 divided by 2 is 35.

Practice 2. Explain long-run growth and productivity to a classmate using one definition, one concrete example, one assumption, and one failure mode.

Solution. Begin with the core claim above, use the worked case as the concrete example, state the condition highlighted by the warning, and choose a failure where that condition does not hold. A complete explanation connects all four pieces instead of listing them.

Mastery practice A. Reconstruct long-run growth and productivity from a blank page. Include the central definition, the governing rule, one required assumption, and one boundary case.

Solution. Start from the blue idea box, but rewrite it in my own words. Identify the objects and state, name the rule before using it, copy the relevant assumption from the details audit, and choose a boundary where that assumption becomes equality or fails. A complete solution explains why each part belongs; a list of vocabulary is not enough.

Mastery practice B. A classmate gets a polished-looking answer to a long-run growth and productivity problem but never states a model or checks the result. Write the shortest useful review of that solution.

Solution. I would ask four concrete questions: What exactly are the inputs and desired output? Which rule licenses the main step? Which assumption could invalidate it? Which independent check supports the conclusion? If the answer cannot survive those four questions, I treat the

numerical or verbal result as unverified.

CHAPTER 3 Unemployment, inflation, and labor markets

The idea

Unemployment data classify employment, active search, and labor-force participation. Inflation redistributes purchasing power and complicates contracts; expected and unexpected inflation have different effects. The Phillips relationship is conditional, not permanent.

Rebuild the chapter from first principles

The claim I need to own is this: Unemployment data classify employment, active search, and labor-force participation. Inflation redistributes purchasing power and complicates contracts; expected and unexpected inflation have different effects. The Phillips relationship is conditional, not permanent. I do not count that as learned just because the sentence looks familiar. I should be able to name the objects, state what changes and what stays fixed, recover the rule from the definitions, and explain why the result is allowed.

The move

My working sequence

1. **Translate.** Rewrite the prompt in the language of unemployment, inflation, and labor markets. List the known quantities, the unknown, the units or types, and any hidden constraint.
2. **Choose.** State the theorem, model, algorithm, accounting rule, or physical law before substituting values. This is where I make the assumption visible.
3. **Execute.** Work one justified step at a time and keep intermediate state readable enough that I can audit it later.
4. **Verify.** Check a boundary case, sign, unit, invariant, order of magnitude, or alternative derivation. Then translate the result back into an ordinary sentence.

Details I would refuse to skip

- **Definitions:** I should be able to define every technical noun in the chapter without using that same noun in the definition.
- **Assumptions:** I write the condition that makes the method legal beside the method itself. A correct procedure under the wrong assumptions is still a wrong answer.
- **Representation:** I move freely among words, equations or code, a diagram, and a small numerical example. If one representation disagrees with another, that disagreement is useful evidence.
- **Failure modes:** I keep the nearest counterexample in mind: the boundary where the rule changes, the invariant breaks, or the model stops matching reality.

- **Communication:** My final answer names what the result means and what it does not establish. I do not let notation do the explanatory work for me.

Sanity check

Closed-note check. Can I teach unemployment, inflation, and labor markets on a blank page, derive or reconstruct its main rule, work a fresh example, and diagnose a deliberately broken solution? If I can only recognize the finished work, I am not done.

How this chapter connects

I read this chapter as the bridge from long-run growth and productivity to aggregate demand and aggregate supply. The earlier material supplies the language and constraints; this chapter adds a new reasoning move; the later material asks me to use that move without being told its name. That connection matters because exams and real projects mix chapters on purpose.

The full working model

- **Core claim.** Unemployment data classify employment, active search, and labor-force participation.
- **What moves.** Inflation redistributes purchasing power and complicates contracts; expected and unexpected inflation have different effects.
- **What keeps the answer honest.** The Phillips relationship is conditional, not permanent.
- **Mastery standard.** I can define the objects, rebuild the rule, work a fresh case, compare alternatives, and diagnose a broken solution without relying on recognition.

How I actually think about it

I never read a falling unemployment rate without also checking participation.

The easy version

Unemployment data classify employment, active search, and labor-force participation.

Worked example

Question. Employment is 90, unemployment is 10, and 20 adults are outside the labor force. Find unemployment and participation rates.

Walkthrough. Labor force is 100, so unemployment is 10 percent. Adult population is 120, so participation is 100 divided by 120, or 83.3 percent.

Common miss

The fastest way to get this chapter wrong is to use the visible procedure without naming its assumption, units, time period, reference group, or boundary. I put that condition beside the work and verify the result independently.

Solved chapter practice

Practice 1. Employment is 90, unemployment is 10, and 20 adults are outside the labor force. Find unemployment and participation rates.

Solution. Labor force is 100, so unemployment is 10 percent. Adult population is 120, so participation is 100 divided by 120, or 83.3 percent.

Practice 2. Explain unemployment, inflation, and labor markets to a classmate using one definition, one concrete example, one assumption, and one failure mode.

Solution. Begin with the core claim above, use the worked case as the concrete example, state the condition highlighted by the warning, and choose a failure where that condition does not hold. A complete explanation connects all four pieces instead of listing them.

Mastery practice A. Reconstruct unemployment, inflation, and labor markets from a blank page. Include the central definition, the governing rule, one required assumption, and one boundary case.

Solution. Start from the blue idea box, but rewrite it in my own words. Identify the objects and state, name the rule before using it, copy the relevant assumption from the details audit, and choose a boundary where that assumption becomes equality or fails. A complete solution explains why each part belongs; a list of vocabulary is not enough.

Mastery practice B. A classmate gets a polished-looking answer to a unemployment, inflation, and labor markets problem but never states a model or checks the result. Write the shortest useful review of that solution.

Solution. I would ask four concrete questions: What exactly are the inputs and desired output? Which rule licenses the main step? Which assumption could invalidate it? Which independent check supports the conclusion? If the answer cannot survive those four questions, I treat the numerical or verbal result as unverified.

CHAPTER 4 Aggregate demand and aggregate supply

The idea

Aggregate demand links the price level to planned spending; short-run aggregate supply reflects sticky prices and costs; long-run capacity depends on resources and technology. Demand and supply shocks differ in their output-inflation tradeoffs.

Rebuild the chapter from first principles

The claim I need to own is this: Aggregate demand links the price level to planned spending; short-run aggregate supply reflects sticky prices and costs; long-run capacity depends on resources and technology. Demand and supply shocks differ in their output-inflation tradeoffs. I do not count that as learned just because the sentence looks familiar. I should be able to name the objects, state what changes and what stays fixed, recover the rule from the definitions, and explain why the result is allowed.

The move

My working sequence

1. **Translate.** Rewrite the prompt in the language of aggregate demand and aggregate supply. List the known quantities, the unknown, the units or types, and any hidden constraint.
2. **Choose.** State the theorem, model, algorithm, accounting rule, or physical law before substituting values. This is where I make the assumption visible.
3. **Execute.** Work one justified step at a time and keep intermediate state readable enough that I can audit it later.
4. **Verify.** Check a boundary case, sign, unit, invariant, order of magnitude, or alternative derivation. Then translate the result back into an ordinary sentence.

Details I would refuse to skip

- **Definitions:** I should be able to define every technical noun in the chapter without using that same noun in the definition.
- **Assumptions:** I write the condition that makes the method legal beside the method itself. A correct procedure under the wrong assumptions is still a wrong answer.
- **Representation:** I move freely among words, equations or code, a diagram, and a small numerical example. If one representation disagrees with another, that disagreement is useful evidence.
- **Failure modes:** I keep the nearest counterexample in mind: the boundary where the rule changes, the invariant breaks, or the model stops matching reality.
- **Communication:** My final answer names what the result means and what it does not establish. I do not let notation do the explanatory work for me.

Sanity check

Closed-note check. Can I teach aggregate demand and aggregate supply on a blank page, derive or reconstruct its main rule, work a fresh example, and diagnose a deliberately broken solution? If I can only recognize the finished work, I am not done.

How this chapter connects

I read this chapter as the bridge from unemployment, inflation, and labor markets to money, banking, and the financial system. The earlier material supplies the language and constraints; this chapter adds a new reasoning move; the later material asks me to use that move without being told its name. That connection matters because exams and real projects mix chapters on purpose.

The full working model

- **Core claim.** Aggregate demand links the price level to planned spending; short-run aggregate supply reflects sticky prices and costs; long-run capacity depends on resources and technology.
- **What moves.** Demand and supply shocks differ in their output-inflation tradeoffs.

- **What keeps the answer honest.** The model becomes useful only when I can apply aggregate demand and aggregate supply to an unfamiliar case and defend the assumptions.
- **Mastery standard.** I can define the objects, rebuild the rule, work a fresh case, compare alternatives, and diagnose a broken solution without relying on recognition.

How I actually think about it

I identify the shock before reaching for policy because a demand slump and an oil shock need different conversations.

The easy version

Aggregate demand links the price level to planned spending; short-run aggregate supply reflects sticky prices and costs; long-run capacity depends on resources and technology.

Worked example

Question. What is the short-run effect of a negative demand shock?

Walkthrough. Aggregate demand shifts left, lowering output and the price level relative to baseline. Unemployment rises; adjustment and policy determine the path back toward potential.

Common miss

The fastest way to get this chapter wrong is to use the visible procedure without naming its assumption, units, time period, reference group, or boundary. I put that condition beside the work and verify the result independently.

Solved chapter practice

Practice 1. What is the short-run effect of a negative demand shock?

Solution. Aggregate demand shifts left, lowering output and the price level relative to baseline. Unemployment rises; adjustment and policy determine the path back toward potential.

Practice 2. Explain aggregate demand and aggregate supply to a classmate using one definition, one concrete example, one assumption, and one failure mode.

Solution. Begin with the core claim above, use the worked case as the concrete example, state the condition highlighted by the warning, and choose a failure where that condition does not hold. A complete explanation connects all four pieces instead of listing them.

Mastery practice A. Reconstruct aggregate demand and aggregate supply from a blank page. Include the central definition, the governing rule, one required assumption, and one boundary case.

Solution. Start from the blue idea box, but rewrite it in my own words. Identify the objects and state, name the rule before using it, copy the relevant assumption from the details audit, and choose a boundary where that assumption becomes equality or fails. A complete solution explains why each part belongs; a list of vocabulary is not enough.

Mastery practice B. A classmate gets a polished-looking answer to a aggregate demand and aggregate supply problem but never states a model or checks the result. Write the shortest useful review of that solution.

Solution. I would ask four concrete questions: What exactly are the inputs and desired output? Which rule licenses the main step? Which assumption could invalidate it? Which independent check supports the conclusion? If the answer cannot survive those four questions, I treat the numerical or verbal result as unverified.

CHAPTER 5 Money, banking, and the financial system

The idea

Money serves as medium, unit, and store. Banks transform maturities and create deposits through lending within capital, reserve, risk, and demand constraints. Interest rates connect saving, investment, asset prices, and intertemporal choice.

Rebuild the chapter from first principles

The claim I need to own is this: Money serves as medium, unit, and store. Banks transform maturities and create deposits through lending within capital, reserve, risk, and demand constraints. Interest rates connect saving, investment, asset prices, and intertemporal choice. I do not count that as learned just because the sentence looks familiar. I should be able to name the objects, state what changes and what stays fixed, recover the rule from the definitions, and explain why the result is allowed.

The move

My working sequence

1. **Translate.** Rewrite the prompt in the language of money, banking, and the financial system. List the known quantities, the unknown, the units or types, and any hidden constraint.
2. **Choose.** State the theorem, model, algorithm, accounting rule, or physical law before substituting values. This is where I make the assumption visible.
3. **Execute.** Work one justified step at a time and keep intermediate state readable enough that I can audit it later.
4. **Verify.** Check a boundary case, sign, unit, invariant, order of magnitude, or alternative derivation. Then translate the result back into an ordinary sentence.

Details I would refuse to skip

- **Definitions:** I should be able to define every technical noun in the chapter without using that same noun in the definition.
- **Assumptions:** I write the condition that makes the method legal beside the method itself. A correct procedure under the wrong assumptions is still a wrong answer.
- **Representation:** I move freely among words, equations or code, a diagram, and a small numerical example. If one representation disagrees with another, that disagreement is useful evidence.

- **Failure modes:** I keep the nearest counterexample in mind: the boundary where the rule changes, the invariant breaks, or the model stops matching reality.
- **Communication:** My final answer names what the result means and what it does not establish. I do not let notation do the explanatory work for me.

Sanity check

Closed-note check. Can I teach money, banking, and the financial system on a blank page, derive or reconstruct its main rule, work a fresh example, and diagnose a deliberately broken solution? If I can only recognize the finished work, I am not done.

How this chapter connects

I read this chapter as the bridge from aggregate demand and aggregate supply to monetary policy and transmission. The earlier material supplies the language and constraints; this chapter adds a new reasoning move; the later material asks me to use that move without being told its name. That connection matters because exams and real projects mix chapters on purpose.

The full working model

- **Core claim.** Money serves as medium, unit, and store.
- **What moves.** Banks transform maturities and create deposits through lending within capital, reserve, risk, and demand constraints.
- **What keeps the answer honest.** Interest rates connect saving, investment, asset prices, and intertemporal choice.
- **Mastery standard.** I can define the objects, rebuild the rule, work a fresh case, compare alternatives, and diagnose a broken solution without relying on recognition.

How I actually think about it

My shorthand for this chapter is: my shorthand for this chapter is: the textbook money multiplier is a benchmark, not a promise that reserves mechanically force banks to lend.

The easy version

Money serves as medium, unit, and store.

Worked example

Question. If nominal interest is 6 percent and expected inflation is 2 percent, approximate the real rate.

Walkthrough. The Fisher approximation gives a 4 percent real interest rate; exact calculation is slightly below 4 percent.

Common miss

The fastest way to get this chapter wrong is to use the visible procedure without naming its assumption, units, time period, reference group, or boundary. I put that condition beside the work and verify the result independently.

Solved chapter practice

Practice 1. If nominal interest is 6 percent and expected inflation is 2 percent, approximate the real rate.

Solution. The Fisher approximation gives a 4 percent real interest rate; exact calculation is slightly below 4 percent.

Practice 2. Explain money, banking, and the financial system to a classmate using one definition, one concrete example, one assumption, and one failure mode.

Solution. Begin with the core claim above, use the worked case as the concrete example, state the condition highlighted by the warning, and choose a failure where that condition does not hold. A complete explanation connects all four pieces instead of listing them.

Mastery practice A. Reconstruct money, banking, and the financial system from a blank page. Include the central definition, the governing rule, one required assumption, and one boundary case.

Solution. Start from the blue idea box, but rewrite it in my own words. Identify the objects and state, name the rule before using it, copy the relevant assumption from the details audit, and choose a boundary where that assumption becomes equality or fails. A complete solution explains why each part belongs; a list of vocabulary is not enough.

Mastery practice B. A classmate gets a polished-looking answer to a money, banking, and the financial system problem but never states a model or checks the result. Write the shortest useful review of that solution.

Solution. I would ask four concrete questions: What exactly are the inputs and desired output? Which rule licenses the main step? Which assumption could invalidate it? Which independent check supports the conclusion? If the answer cannot survive those four questions, I treat the numerical or verbal result as unverified.

CHAPTER 6 Monetary policy and transmission

The idea

A central bank influences short-term financial conditions through its operating framework, communication, asset holdings, and lender-of-last-resort role. Policy transmits through rates, credit, exchange rates, expectations, wealth, and risk taking with lags and uncertainty.

Rebuild the chapter from first principles

The claim I need to own is this: A central bank influences short-term financial conditions through its operating framework, communication, asset holdings, and lender-of-last-resort role. Policy transmits

through rates, credit, exchange rates, expectations, wealth, and risk taking with lags and uncertainty. I do not count that as learned just because the sentence looks familiar. I should be able to name the objects, state what changes and what stays fixed, recover the rule from the definitions, and explain why the result is allowed.

The move

My working sequence

1. **Translate.** Rewrite the prompt in the language of monetary policy and transmission. List the known quantities, the unknown, the units or types, and any hidden constraint.
2. **Choose.** State the theorem, model, algorithm, accounting rule, or physical law before substituting values. This is where I make the assumption visible.
3. **Execute.** Work one justified step at a time and keep intermediate state readable enough that I can audit it later.
4. **Verify.** Check a boundary case, sign, unit, invariant, order of magnitude, or alternative derivation. Then translate the result back into an ordinary sentence.

Details I would refuse to skip

- **Definitions:** I should be able to define every technical noun in the chapter without using that same noun in the definition.
- **Assumptions:** I write the condition that makes the method legal beside the method itself. A correct procedure under the wrong assumptions is still a wrong answer.
- **Representation:** I move freely among words, equations or code, a diagram, and a small numerical example. If one representation disagrees with another, that disagreement is useful evidence.
- **Failure modes:** I keep the nearest counterexample in mind: the boundary where the rule changes, the invariant breaks, or the model stops matching reality.
- **Communication:** My final answer names what the result means and what it does not establish. I do not let notation do the explanatory work for me.

Sanity check

Closed-note check. Can I teach monetary policy and transmission on a blank page, derive or reconstruct its main rule, work a fresh example, and diagnose a deliberately broken solution? If I can only recognize the finished work, I am not done.

How this chapter connects

I read this chapter as the bridge from money, banking, and the financial system to fiscal policy, deficits, and public debt. The earlier material supplies the language and constraints; this chapter adds a new reasoning move; the later material asks me to use that move without being told its name. That connection matters because exams and real projects mix chapters on purpose.

The full working model

- **Core claim.** A central bank influences short-term financial conditions through its operating framework, communication, asset holdings, and lender-of-last-resort role.
- **What moves.** Policy transmits through rates, credit, exchange rates, expectations, wealth, and risk taking with lags and uncertainty.
- **What keeps the answer honest.** The model becomes useful only when I can apply monetary policy and transmission to an unfamiliar case and defend the assumptions.
- **Mastery standard.** I can define the objects, rebuild the rule, work a fresh case, compare alternatives, and diagnose a broken solution without relying on recognition.

How I actually think about it

I trace the entire transmission chain instead of saying 'rates down, economy up.'

The easy version

A central bank influences short-term financial conditions through its operating framework, communication, asset holdings, and lender-of-last-resort role.

Worked example

Question. How can a policy-rate increase reduce inflation?

Walkthrough. Higher borrowing costs and tighter credit reduce interest-sensitive demand, can strengthen the currency, and temper expectations. Weaker aggregate demand eases price pressure, though timing and supply conditions matter.

Common miss

The fastest way to get this chapter wrong is to use the visible procedure without naming its assumption, units, time period, reference group, or boundary. I put that condition beside the work and verify the result independently.

Solved chapter practice

Practice 1. How can a policy-rate increase reduce inflation?

Solution. Higher borrowing costs and tighter credit reduce interest-sensitive demand, can strengthen the currency, and temper expectations. Weaker aggregate demand eases price pressure, though timing and supply conditions matter.

Practice 2. Explain monetary policy and transmission to a classmate using one definition, one concrete example, one assumption, and one failure mode.

Solution. Begin with the core claim above, use the worked case as the concrete example, state the condition highlighted by the warning, and choose a failure where that condition does not hold. A complete explanation connects all four pieces instead of listing them.

Mastery practice A. Reconstruct monetary policy and transmission from a blank page. Include the central definition, the governing rule, one required assumption, and one boundary case.

Solution. Start from the blue idea box, but rewrite it in my own words. Identify the objects and state, name the rule before using it, copy the relevant assumption from the details audit, and choose a boundary where that assumption becomes equality or fails. A complete solution explains why each part belongs; a list of vocabulary is not enough.

Mastery practice B. A classmate gets a polished-looking answer to a monetary policy and transmission problem but never states a model or checks the result. Write the shortest useful review of that solution.

Solution. I would ask four concrete questions: What exactly are the inputs and desired output? Which rule licenses the main step? Which assumption could invalidate it? Which independent check supports the conclusion? If the answer cannot survive those four questions, I treat the numerical or verbal result as unverified.

CHAPTER 7 Fiscal policy, deficits, and public debt

The idea

Taxes and spending affect demand, incentives, insurance, distribution, and public investment. Multipliers depend on slack, monetary response, openness, timing, and financing. Debt sustainability depends on primary balances, growth, interest rates, maturity, and credibility.

Rebuild the chapter from first principles

The claim I need to own is this: Taxes and spending affect demand, incentives, insurance, distribution, and public investment. Multipliers depend on slack, monetary response, openness, timing, and financing. Debt sustainability depends on primary balances, growth, interest rates, maturity, and credibility. I do not count that as learned just because the sentence looks familiar. I should be able to name the objects, state what changes and what stays fixed, recover the rule from the definitions, and explain why the result is allowed.

The move

My working sequence

1. **Translate.** Rewrite the prompt in the language of fiscal policy, deficits, and public debt. List the known quantities, the unknown, the units or types, and any hidden constraint.
2. **Choose.** State the theorem, model, algorithm, accounting rule, or physical law before substituting values. This is where I make the assumption visible.
3. **Execute.** Work one justified step at a time and keep intermediate state readable enough that I can audit it later.
4. **Verify.** Check a boundary case, sign, unit, invariant, order of magnitude, or alternative derivation. Then translate the result back into an ordinary sentence.

Details I would refuse to skip

- **Definitions:** I should be able to define every technical noun in the chapter without using that same noun in the definition.
- **Assumptions:** I write the condition that makes the method legal beside the method itself. A correct procedure under the wrong assumptions is still a wrong answer.
- **Representation:** I move freely among words, equations or code, a diagram, and a small numerical example. If one representation disagrees with another, that disagreement is useful evidence.
- **Failure modes:** I keep the nearest counterexample in mind: the boundary where the rule changes, the invariant breaks, or the model stops matching reality.
- **Communication:** My final answer names what the result means and what it does not establish. I do not let notation do the explanatory work for me.

Sanity check

Closed-note check. Can I teach fiscal policy, deficits, and public debt on a blank page, derive or reconstruct its main rule, work a fresh example, and diagnose a deliberately broken solution? If I can only recognize the finished work, I am not done.

How this chapter connects

I read this chapter as the bridge from monetary policy and transmission to trade, exchange rates, and international accounts. The earlier material supplies the language and constraints; this chapter adds a new reasoning move; the later material asks me to use that move without being told its name. That connection matters because exams and real projects mix chapters on purpose.

The full working model

- **Core claim.** Taxes and spending affect demand, incentives, insurance, distribution, and public investment.
- **What moves.** Multipliers depend on slack, monetary response, openness, timing, and financing.
- **What keeps the answer honest.** Debt sustainability depends on primary balances, growth, interest rates, maturity, and credibility.
- **Mastery standard.** I can define the objects, rebuild the rule, work a fresh case, compare alternatives, and diagnose a broken solution without relying on recognition.

How I actually think about it

My shorthand for this chapter is: my shorthand for this chapter is: a deficit is a flow and debt is a stock; mixing them ruins the analysis immediately.

The easy version

Taxes and spending affect demand, incentives, insurance, distribution, and public investment.

Worked example

Question. Government spending rises by 100 and the simple multiplier is 1.5. What is the model's output effect?

Walkthrough. The model predicts a 150 increase in output, but actual effects depend on crowding out, imports, capacity, policy response, and whether the spending arrives when intended.

Common miss

The fastest way to get this chapter wrong is to use the visible procedure without naming its assumption, units, time period, reference group, or boundary. I put that condition beside the work and verify the result independently.

Solved chapter practice

Practice 1. Government spending rises by 100 and the simple multiplier is 1.5. What is the model's output effect?

Solution. The model predicts a 150 increase in output, but actual effects depend on crowding out, imports, capacity, policy response, and whether the spending arrives when intended.

Practice 2. Explain fiscal policy, deficits, and public debt to a classmate using one definition, one concrete example, one assumption, and one failure mode.

Solution. Begin with the core claim above, use the worked case as the concrete example, state the condition highlighted by the warning, and choose a failure where that condition does not hold. A complete explanation connects all four pieces instead of listing them.

Mastery practice A. Reconstruct fiscal policy, deficits, and public debt from a blank page. Include the central definition, the governing rule, one required assumption, and one boundary case.

Solution. Start from the blue idea box, but rewrite it in my own words. Identify the objects and state, name the rule before using it, copy the relevant assumption from the details audit, and choose a boundary where that assumption becomes equality or fails. A complete solution explains why each part belongs; a list of vocabulary is not enough.

Mastery practice B. A classmate gets a polished-looking answer to a fiscal policy, deficits, and public debt problem but never states a model or checks the result. Write the shortest useful review of that solution.

Solution. I would ask four concrete questions: What exactly are the inputs and desired output? Which rule licenses the main step? Which assumption could invalidate it? Which independent check supports the conclusion? If the answer cannot survive those four questions, I treat the numerical or verbal result as unverified.

CHAPTER 8 Trade, exchange rates, and international accounts

The idea

Comparative advantage supports gains from trade while adjustment costs and distribution remain real. The current and financial accounts record international transactions; exchange rates respond to relative returns, prices, policy, risk, and expectations.

Rebuild the chapter from first principles

The claim I need to own is this: Comparative advantage supports gains from trade while adjustment costs and distribution remain real. The current and financial accounts record international transactions; exchange rates respond to relative returns, prices, policy, risk, and expectations. I do not count that as learned just because the sentence looks familiar. I should be able to name the objects, state what changes and what stays fixed, recover the rule from the definitions, and explain why the result is allowed.

The move

My working sequence

1. **Translate.** Rewrite the prompt in the language of trade, exchange rates, and international accounts. List the known quantities, the unknown, the units or types, and any hidden constraint.
2. **Choose.** State the theorem, model, algorithm, accounting rule, or physical law before substituting values. This is where I make the assumption visible.
3. **Execute.** Work one justified step at a time and keep intermediate state readable enough that I can audit it later.
4. **Verify.** Check a boundary case, sign, unit, invariant, order of magnitude, or alternative derivation. Then translate the result back into an ordinary sentence.

Details I would refuse to skip

- **Definitions:** I should be able to define every technical noun in the chapter without using that same noun in the definition.
- **Assumptions:** I write the condition that makes the method legal beside the method itself. A correct procedure under the wrong assumptions is still a wrong answer.
- **Representation:** I move freely among words, equations or code, a diagram, and a small numerical example. If one representation disagrees with another, that disagreement is useful evidence.
- **Failure modes:** I keep the nearest counterexample in mind: the boundary where the rule changes, the invariant breaks, or the model stops matching reality.
- **Communication:** My final answer names what the result means and what it does not establish. I do not let notation do the explanatory work for me.

Sanity check

Closed-note check. Can I teach trade, exchange rates, and international accounts on a blank page, derive or reconstruct its main rule, work a fresh example, and diagnose a deliberately broken solution? If I can only recognize the finished work, I am not done.

How this chapter connects

I read this chapter as the bridge from fiscal policy, deficits, and public debt to the cumulative course model. The earlier material supplies the language and constraints; this chapter adds a new reasoning move; the later material asks me to use that move without being told its name. That connection matters because exams and real projects mix chapters on purpose.

The full working model

- **Core claim.** Comparative advantage supports gains from trade while adjustment costs and distribution remain real.
- **What moves.** The current and financial accounts record international transactions; exchange rates respond to relative returns, prices, policy, risk, and expectations.
- **What keeps the answer honest.** The model becomes useful only when I can apply trade, exchange rates, and international accounts to an unfamiliar case and defend the assumptions.
- **Mastery standard.** I can define the objects, rebuild the rule, work a fresh case, compare alternatives, and diagnose a broken solution without relying on recognition.

How I actually think about it

I can support aggregate gains from trade and still ask who bears the transition cost.

The easy version

Comparative advantage supports gains from trade while adjustment costs and distribution remain real.

Worked example

Question. A domestic currency appreciates. What happens to export and import prices, all else equal?

Walkthrough. Domestic exports become more expensive to foreigners and imports become cheaper to domestic buyers, tending to reduce net exports, though contracts and elasticities delay the response.

Common miss

The fastest way to get this chapter wrong is to use the visible procedure without naming its assumption, units, time period, reference group, or boundary. I put that condition beside the work and verify the result independently.

Solved chapter practice

Practice 1. A domestic currency appreciates. What happens to export and import prices, all else equal?

Solution. Domestic exports become more expensive to foreigners and imports become cheaper to domestic buyers, tending to reduce net exports, though contracts and elasticities delay the response.

Practice 2. Explain trade, exchange rates, and international accounts to a classmate using one definition, one concrete example, one assumption, and one failure mode.

Solution. Begin with the core claim above, use the worked case as the concrete example, state the condition highlighted by the warning, and choose a failure where that condition does not hold. A complete explanation connects all four pieces instead of listing them.

Mastery practice A. Reconstruct trade, exchange rates, and international accounts from a blank page. Include the central definition, the governing rule, one required assumption, and one boundary case.

Solution. Start from the blue idea box, but rewrite it in my own words. Identify the objects and state, name the rule before using it, copy the relevant assumption from the details audit, and choose a boundary where that assumption becomes equality or fails. A complete solution explains why each part belongs; a list of vocabulary is not enough.

Mastery practice B. A classmate gets a polished-looking answer to a trade, exchange rates, and international accounts problem but never states a model or checks the result. Write the shortest useful review of that solution.

Solution. I would ask four concrete questions: What exactly are the inputs and desired output? Which rule licenses the main step? Which assumption could invalidate it? Which independent check supports the conclusion? If the answer cannot survive those four questions, I treat the numerical or verbal result as unverified.

Cumulative study plan

I use this packet in three passes. First I reconstruct each model and work its examples without looking. Second I mix chapters so the tool is no longer named for me. Third I explain a complete case aloud, including assumptions, units, uncertainty, failure modes, and what evidence would change my conclusion.