

# Macroeconomics: Principles and Applications

## Course Outline

HSSP Program (Summer 2019), MIT

### Learning Outcomes

To think like an economist:

- there is a substitute for everything.
- every choice has a cost: there is no such thing as a free lunch!
- value is a function of supply and demand.

### Course Content

This course covers models and concepts in macroeconomics. Students will apply the models and theories to analyze real-world economic problems and policies. Students will interpret the actions of the Federal Reserve Banks and the Congress, and understand data published by the Bureau of Labor Statistics. Topics include economic growth, inflation and recession, money and banking, stocks and bonds, fiscal and monetary policy, international trade and finance, and unemployment.

Many students asked why are we learning all the fundamental principles and concepts instead of discussing policies? The answer is- we cannot have an insightful discussion without understanding those fundamental principles first!

### Rationale

- **To introduce economics as a social science:** in many secondary schools in the United States, economics is not a widely offered subject. Curriculum varies from one school to the other. Although this course is not meant to prepare for any standardized exams, the curriculum remains rigorous and aims to provide a solid overview of quantitative economic analysis.
- **To analyze and use data:** students will learn how to analyze and interpret data- knowing what they represent and their shortcomings. There is no absolute answer as “good” or “bad”.
- **To be an informed citizen:** our economy can be largely impacted by politics. We are often misguided by politicians and news media on how we perceive a problem. By knowing fundamental tools in economics, students will be able to critically analyze some of the issues.

### Course Outline

*This outline may change at the discretion of the instructor upon the pacing of the class.*

Week 1	<ul style="list-style-type: none"><li>• Introduction to the Study of Economics</li><li>• Opportunity Cost and Allocative Efficiency</li><li>• The Production Possibility Curve</li><li>• The Market System: The Supply and Demand Curve</li><li>• The Market System: Price Floor and Ceiling</li></ul> Case Studies: <ul style="list-style-type: none"><li>• The National Debt</li><li>• The Pizza Market</li></ul>
Week 2	<ul style="list-style-type: none"><li>• Public Goods and Market Failure</li><li>• Positive and Negative Externality</li><li>• The Gross Domestic Product (GDP) and Its Calculation</li><li>• Shortcomings of the RGDP as a measure</li><li>• The Business Cycle</li><li>• Unemployment</li></ul> Case Studies:

	<ul style="list-style-type: none"> <li>• Tragedy of the Commons: An Introduction to Environmental Economics</li> <li>• Unemployment as a Measure on BLS</li> </ul>
Week 3	<ul style="list-style-type: none"> <li>• Aggregate Supply and Demand</li> <li>• AS/AD Adjustment Mechanism</li> <li>• Inflation and Recession</li> <li>• Fiscal Policy</li> <li>• Spending Multiplier</li> </ul> <p>Case Studies:</p> <ul style="list-style-type: none"> <li>• The Great Depression</li> </ul>
Week 4	<ul style="list-style-type: none"> <li>• More on Fiscal Policy</li> <li>• The Circular Flow Diagram</li> <li>• Money Creation</li> <li>• The Supply and Demand of Money: An Introduction to Banking System</li> </ul> <p>Case Studies:</p> <ul style="list-style-type: none"> <li>• Financial Crisis of 2008</li> </ul>
Week 5	<ul style="list-style-type: none"> <li>• Interest Rates</li> <li>• Interest Rate Adjustment Mechanism</li> <li>• Monetary Policy and the Taylor Rule</li> </ul> <p>Case Studies:</p> <ul style="list-style-type: none"> <li>• Financial Crisis Continued</li> </ul>
Week 6	<ul style="list-style-type: none"> <li>• Monetary Policy Time Lags</li> <li>• Comparing Fiscal and Monetary Policy</li> <li>• Why Do Countries Trade?</li> <li>• Terms of Trade and Comparative Advantage</li> </ul> <p>Case Studies:</p> <ul style="list-style-type: none"> <li>• The Trade War Between the United States and China</li> <li>• Island Economy</li> </ul>
Week 7	<ul style="list-style-type: none"> <li>• World Price and Trade Protection</li> <li>• Balance of Payment</li> <li>• Exchange Rate Regimes</li> </ul> <p>Case Studies:</p> <ul style="list-style-type: none"> <li>• (on anything)</li> </ul>