COURSE DESCRIPTION

Macroeconomics and the Global Economic Environment is an intermediate-level course in macroeconomics with an emphasis on current events and policy applications. The goal of this course is to provide the foundation needed to recognize and understand broad economic and financial movements in the global economy. Key topics include national income accounting, production and economic growth, employment, consumption, investment, business cycles, monetary policy, and international trade and finance. By the end of this course, students will be able to evaluate and discuss the global economic environment in which business and financial decisions are made.

COURSE MATERIAL

Canvas
The Canvas website contains the syllabus, lecture notes, quizzes, teaching assistants’ office hours and locations, regrade request forms, and other useful information. Canvas is also a useful hub to start and participate in course-related discussions. You need to have a Wharton account to access the website. You can apply for a Wharton account online if you do not have one.

Reading Material
The bulk of the course material comes from the lecture notes and course readings. The lecture notes are available on Canvas. Most course readings come from The Wall Street Journal, The Financial Times, The Economist, or from Federal Reserve Banks’ publications. They are hyperlinked to web sources from within the syllabus.

There is no required textbook for this course. However, you will see references to sections of Macroeconomics (ninth edition) from Andrew B. Abel, Ben S. Bernanke and Dean Croushore, Addison-Wesley, 2017 (referred to as ABC) and Macroeconomics (fourth edition) from Charles I. Jones, Norton, 2018 (referred to as Jones) in the course outline section below. These are supplemental, but strongly recommended, readings that supplement our class discussions. These textbooks are available at the Bookstore and at the Lippincott library reserve. Moreover, the study guides that supplement these textbooks are useful in aiding students who would benefit from additional explanations and practice with the material.

Throughout the semester, you should keep current with economic news. A subscription to The Wall Street Journal, The Financial Times, The Economist or a close substitute is recommended. Selected articles from these sources may be added to the list of required readings later during the semester.
Grading
Grades are based on two examinations (70%), six quizzes (10%), and class participation (20%). Class participation includes attendance, but primarily depends on coming to class prepared to discuss the assigned material, and on your respectful and meaningful participation in class discussions and case studies.

Examinations
The midterm examination is on Monday, February 26, from 6:00 to 8:00pm. The final examination is tentatively scheduled on Thursday, May 3, from 6:00 to 8:00pm. The midterm and the final examinations are comprehensive and closed book. However, you may have one single-sided 8.5” x 11” page of handwritten notes for the midterm and one double-sided 8.5” x 11” page of handwritten notes for the final. These handwritten sheets can only contain your own notes in your own handwriting. In particular, they may not contain large portions of reproduced notes or any other course materials such as slides, solution manuals or answer keys. Calculators are permitted. The final examination is cumulative over the material from the entire course.

The midterm examination counts as one grade and the final examination counts as two grades. The total examination grade is computed as the average of the best two out of three grades. In other words, the lowest grade among these three grades is dropped. This policy of dropping the lowest examination grade provides you insurance against scheduling conflicts (inability to attend the midterm examination) and anomalous performances (a bad day). Because this insurance is being provided to you, no requests to reschedule or retake the midterm examination will be entertained unless specifically mandated by university policy. If you miss the midterm examination for any reason, you can simply use your insurance policy and drop that exam. The final examination can be rescheduled only if required by university policy and only during the official make-up period.

Regrade requests
Regrade requests must be submitted using the regrade request form and the statement of honesty posted on Canvas and must be accompanied by your exam. Requests must be submitted within one week from the date the examination is returned (whether or not you actually pick up the exam on that date). Regrade requests must be very specific. For any request, the entire exam will be automatically regraded; meaning, the grade may stay the same, go up or go down after regrading. Any alteration of the exam is therefore strictly forbidden and will be considered as a violation to the Code of Academic Integrity.

Quizzes
There will be six quizzes available on Canvas. The quizzes are designed to reinforce key concepts from the classes and to help you prepare for the examinations. Your final quiz grade will be the average of your best five quizzes. Due dates are indicated in the table below and under the course outline section of this syllabus. The quizzes must be submitted by 9:00am on the due date. Quizzes will not be accepted late and no regrade requests will be entertained. Answers to quizzes will be posted on Canvas shortly after the due date.
<table>
<thead>
<tr>
<th>QUIZ #</th>
<th>TOPIC</th>
<th>AVAILABLE ON</th>
<th>DUE BY 9:00am ON</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to macroeconomic data</td>
<td>Monday, January 22</td>
<td>Monday, January 29</td>
</tr>
<tr>
<td>2</td>
<td>Production, employment, and growth</td>
<td>Monday, February 5</td>
<td>Monday, February 12</td>
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<tr>
<td>3</td>
<td>Consumption, saving, and investment</td>
<td>Wednesday, February 14</td>
<td>Monday, February 19</td>
</tr>
<tr>
<td>4</td>
<td>The business cycle</td>
<td>Wednesday, March 14</td>
<td>Monday, March 19</td>
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<tr>
<td>5</td>
<td>Monetary policy</td>
<td>Wednesday, March 28</td>
<td>Monday, April 2</td>
</tr>
<tr>
<td>6</td>
<td>The global economy</td>
<td>Wednesday, April 11</td>
<td>Monday, April 16</td>
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**ACADEMIC INTEGRITY**

All relevant University policies regarding Academic Integrity must be followed. Please consult the [Code of Academic Integrity](#) for details.

**CONTACT INFORMATION**

Email: alandry@wharton.upenn.edu
Office hours: Tuesdays, 9:30 - 10:30am
Office: SHDH 2432

Most information about the course is posted on Canvas. All questions related to the course material should be posted on Canvas. I will be happy to answer short and concise questions that are posted on Canvas. This is an efficient way to clarify concepts and to disseminate information.

**TEACHING ASSISTANTS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Email address</th>
<th>Office hours</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kishore Jayakumar</td>
<td><a href="mailto:kishorej@wharton.upenn.edu">kishorej@wharton.upenn.edu</a></td>
<td></td>
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## COURSE SCHEDULE

<table>
<thead>
<tr>
<th>LECTURE</th>
<th>DATE</th>
<th>TOPIC</th>
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<tbody>
<tr>
<td>1</td>
<td>Wednesday, January 17</td>
<td>National income accounting</td>
</tr>
<tr>
<td>2</td>
<td>Monday, January 22</td>
<td>Measuring economic changes over time</td>
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<tr>
<td>3</td>
<td>Wednesday, January 24</td>
<td>Production and economic growth</td>
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<tr>
<td>4</td>
<td>Monday, January 29</td>
<td>Drivers of productivity and global competitiveness</td>
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<tr>
<td>5</td>
<td>Wednesday, January 31</td>
<td>CASE STUDY: The Solow growth model unleashed</td>
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<tr>
<td>6</td>
<td>Monday, February 5</td>
<td>The labor market</td>
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<tr>
<td>7</td>
<td>Wednesday, February 7</td>
<td>Consumption and saving decisions</td>
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<td>8</td>
<td>Monday, February 12</td>
<td>Investment and goods market equilibrium</td>
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<td>9</td>
<td>Wednesday, February 14</td>
<td>The asset market, money, and prices</td>
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<tr>
<td>10</td>
<td>Monday, February 19</td>
<td>The business cycle and the IS/LM model</td>
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<tr>
<td></td>
<td>Wednesday, February 21</td>
<td>Review session</td>
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<td></td>
<td><strong>Monday, February 26</strong></td>
<td>Midterm examination from 6:00 to 8:00pm</td>
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<td></td>
<td>Wednesday, February 28</td>
<td>No class</td>
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<tr>
<td></td>
<td>Monday, March 5</td>
<td>No class, Spring break</td>
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<tr>
<td></td>
<td>Wednesday, March 7</td>
<td>No class, Spring break</td>
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<tr>
<td>11</td>
<td>Monday, March 12</td>
<td>Firms’ pricing behavior and the Phillips curve</td>
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<td>12</td>
<td>Wednesday, March 14</td>
<td>Aggregate demand and aggregate supply</td>
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<tr>
<td>13</td>
<td>Monday, March 19</td>
<td>The Federal Reserve System</td>
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<td>14</td>
<td>Wednesday, March 21</td>
<td>Monetary policy</td>
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<td>15</td>
<td>Monday, March 26</td>
<td>CASE STUDY: The labor market and U.S. monetary policy</td>
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<td>16</td>
<td>Wednesday, March 28</td>
<td>CASE STUDY: The term structure of interest rates</td>
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<td>17</td>
<td>Monday, April 2</td>
<td>International trade</td>
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<td>18</td>
<td>Wednesday, April 4</td>
<td>Exchange rates and international finance 1</td>
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<tr>
<td>19</td>
<td>Monday, April 8</td>
<td>Exchange rates and international finance 2</td>
</tr>
<tr>
<td>20</td>
<td>Wednesday, April 11</td>
<td>The government and the macroeconomy</td>
</tr>
<tr>
<td>21</td>
<td>Monday, April 16</td>
<td>The world today and global growth prospects</td>
</tr>
<tr>
<td></td>
<td>Wednesday, April 18</td>
<td>Review session</td>
</tr>
<tr>
<td></td>
<td><strong>Thursday, May 3</strong></td>
<td>Final Examination from 6:00pm to 8:00pm</td>
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COURSE OUTLINE AND READING LIST

Topic 1: Introduction to Macroeconomic Data

Wednesday, January 17: National Accounting

Topics: origin of national income accounting, definitions and measurements of Gross Domestic Product (GDP), GDP components, production, income, and expenditure approach of measuring GDP, saving and wealth

Readings: ABC Ch. 2.1-2.3
Jones Ch. 2.1 and 2.2
Will America’s economy overheat in 2018? The Economist, December 2017
Monetary Policy and the Economic Outlook: A Fine Balancing Act, Economic Letter, Federal Reserve Bank of San Francisco, December 2017

Monday, January 22: Measuring Economic Changes over Time

Topics: nominal and real GDP, GDP across countries, growth rates, the rule of 70, price indices and inflation, nominal and real interest rates, the Fisher equation

Readings: ABC Ch. 2.4 and 2.5
Jones Ch. 2.3 and 2.4
Nobody seems to know why there is no US inflation, The Financial Time, September 2017
Missing growth from creative destruction, Economic Letter, Federal Reserve Bank of San Francisco, October 2017

Quiz #1 due on Monday, January 29 by 9:00am
Topic 2: Production and Economic Growth

Wednesday, January 24: Production and Economic Growth

Topics: production function, return to scale, Cobb-Douglas production function, capital and labor inputs, Total Factor Productivity, marginal product of capital and labor, diminishing marginal products, capital and labor inputs allocation, production and shocks to labor, capital or TFP, sources of economic growth, income differences across countries, growth accounting

Readings: ABC Ch. 3.1 and 6.1
Jones Ch. 4

Monday, January 29: Drivers of Productivity and Global Competitiveness

Topics: the Solow growth model, innovation and economic growth, determinants of long-run living standards, international convergence, government policies and long-run growth

Readings: ABC Ch. 6.2-6.4
Jones Ch. 5
Is China growth miracle over? Economic Letter, Federal Reserve Bank of San Francisco, August 2015

Wednesday, January 31: The Solow Growth Model Unleashed

Topic 3: Economic Markets

Monday, February 5: The Labor Market

Topics: the U.S. labor market, labor demand, labor supply, income and substitution effects, labor market equilibrium, full-employment output, wages and inequality, labor market measurements, frictional vs. structural unemployment, natural rate of unemployment, Okun's law

Readings: ABC Ch. 3.2-3.6
Jones Ch. 7
Inequality is a threat to our democracies, The Financial Times, December 2017
Demographic transition and low U.S. interest rates, Economic Letter, Federal Reserve Bank of San Francisco, September 2017

Quiz #2 due on Monday, February 12 by 9:00am

Wednesday, February 7: Consumption and Saving Decisions

Topics: consumption and saving decisions, the intertemporal budget constraint, income and wealth, income and substitution effects, permanent-income hypothesis, Ricardian equivalence, borrowing constraints, empirical evidence on consumption

Readings: ABC Ch. 4.1 and appendix 4.A
Jones Ch. 16

Monday, February 12: Investment and Goods Market Equilibrium

Topics: firms’ investment decisions, the user cost of capital, desired capital stock and investment, components of physical investment, saving and investment equilibrium, the real interest rate

Readings: ABC Ch. 4.2-4.3
Jones Ch. 17
Why are interest rates so low?, by Ben Bernanke, March 2015
Why are interest rates so low, part 2: Secular stagnation, by Ben Bernanke, March 2015
Why are interest rates so low, part 3: The Global Savings Glut, by Ben Bernanke, April 2015
**Wednesday, February 14: The Asset Market, Money, and Prices**

**Topics:** monetary aggregates, portfolio allocation and the demand for assets, money demand, money supply creation, the quantity theory of money, asset market equilibrium, money growth and inflation, the costs of inflation

**Readings:** ABC Ch. 7  
Jones Ch. 8

**Quiz #3** due on Monday, February 19 by 9:00am

**Monday, February 19: The Business Cycle and the IS/LM Model**

**Topics:** business cycle trends and fluctuations, actual and potential output, overview of the short-run model, equilibrium in the labor, goods, and asset markets, macroeconomic shocks and the IS/LM model

**Readings:** ABC Ch. 8 and 9.1-9.4  

**Wednesday, February 21: Review session**

**Midterm Examination:** Monday, February 26, from 6:00 to 8:00pm
**Topic 4: Business Cycle Models**

**Monday, March 12: Firms’ Pricing Behavior and the Phillips Curve**

**Topics:** firms’ pricing behavior, unemployment and inflation, the Phillips curve, the role of inflation expectations

**Readings:** 
- ABC Ch. 11.2 and 12
- Jones Ch. 12
- The Natural Rate of Unemployment over the past 100 years. *Economic Letter*, Federal Reserve Bank of San Francisco, August 2017

**Wednesday, March 14: Aggregate Demand and Aggregate Supply**

**Topics:** aggregate demand curve, aggregate supply curve, the AS/AD framework, the liquidity trap, the dangers of deflation, expectations and economic activity

**Readings:** 
- ABC Ch. 9.5-9.6
- Jones Ch. 13

**Quiz #4** due on Monday, March 19 by 9:00am
**Topic 5: Monetary Policy**

**Monday, March 19: The Federal Reserve System**

*Topics:* the Federal Reserve System, central banking around the world, the Federal Open Market Committee, conventional monetary policy, open market operations, the federal funds market

*Readings:*  
**ABC** Ch. 14.1-14.3

"Central Banks and the Federal Reserve System," by Frederic Mishkin on Study.Net  
"Tools of Monetary Policy," by Frederic Mishkin on Study.Net  
*Monetary policy, money, and inflation, Economic Letter, Federal Reserve Bank of San Francisco, July 2012*

**Wednesday, March 21: Monetary Policy**

*Topics:* monetary policy rules, the Taylor rule, the limits of conventional monetary policy, the Great Recession, unconventional monetary policy, financial stability

*Readings:*  
**ABC** Ch. 14.4-14.5

*How big a problem is the zero lower bound on interest rates?* by Ben Bernanke, April 2017

**Monday, March 26: The Labor Market and U.S. Monetary Policy**

*Case study:*  
"What should Jerome Powell do?" by Anthony Landry on Canvas

**Wednesday, March 28: The Term Structure of Interest Rates and Monetary Policy**

*Reading:* "Term Structure of Interest Rates," by Frederic Mishkin on Study.Net

*Case study:*  
"The Yield Curve and Growth Forecasts," by Francis Warnock  
Harvard Business School #UV5689 on Study.Net

**Quiz #5** due on Monday, April 2 by 9:00am
**Topic 6: The Global Economy**

**Monday, April 2: International Trade**

**Topics:** facts about international trade, reasons for trade, risk sharing, absolute and comparative advantage, costs and benefits of international trade, trade and capital flows, twin deficits

**Readings:** Jones Ch. 19

**Wednesday, April 4: Exchange Rates and International Finance 1**

**Topics:** open-economy goods-market equilibrium, open-economy saving and investment, fiscal policy and the current account, the nominal and real exchange rates, exchange rate movements and trade flow

**Reading:** ABC Ch. 5

*Has the dollar become more sensitive to interest rates? Economic Letter, Federal Reserve Bank of San Francisco, June 2017*

**Monday, April 9: Exchange Rates and International Finance 2**

**Topics:** open-economy IS/LM, open-economy AS/AD, interest rates and exchange rate movements, international transmission of monetary policy, fixed exchange rates

**Readings:** ABC Ch. 13

Jones Ch. 20
Topic 7: Fiscal Policy

Wednesday, April 11: The Government and the Macroeconomy

Topics: U.S. government spending and revenue, fiscal policy and aggregate demand, government debt and deficits, sustainability of public debt, the European debt crisis, problems of the 21st century

Readings: ABC Ch. 15.1-15.3
Jones Ch. 18
The Fed and fiscal policy, by Ben Bernanke, January 2017
How tax cuts affect revenue? The Wall Street Journal, December 2017
The Penn-Wharton Budget model

Quiz #6 due on Monday, April 16 by 9:00am

Monday, April 16: The World Today and Global Growth Prospects

Readings: World Economic Outlook, Chapter 1 and 2, April 2018
International Monetary Fund

Wednesday, April 18: Review session

Final examination: Thursday, May 3, from 6:00 to 8:00pm