

# Syllabus

## ADVANCED MACROECONOMICS

Instructors: **Dmitriy A. Veselov.**

### 1. Course Description

- a. Title of a Course **Advanced Macroeconomics**
- b. Pre-requisites The basic knowledge of calculus, mathematical analysis and linear algebra.
- c. Course Type **Compulsory**
- d. Abstract: This introductory course to Advanced Macroeconomics along with Econometrics and Advanced Microeconomics forms the core trinity of compulsory disciplines that provide a theoretical background for the master's program in economics at the HSE Faculty of Economics. The one-semester course is taught in English in the 1st and 2nd modules to the first-year graduate students. The course focuses on selected topics which are central to modern macroeconomics, like the short-run economic fluctuations, stabilization policies in the medium-run, the interaction between real sectors and financial markets, macroeconomic policies in the open economy as well as political economy issues of macroeconomic policies.

### 2. Learning Objectives

The objectives of the course are:

- to provide students with the knowledge of core concepts and models of economics,
- to develop students' ability to apply economic models to the analysis of specific economic cases
- to provide students with the knowledge of methodological tools and their applications to the analysis of general problems in economics and social sciences.

### 3. Learning Outcomes

Course gives opportunities to students to apply macroeconomic analysis using both graphical and algebraic techniques to the study of contemporary and historical economic cases, to put their research and professional interests into a broader political and macroeconomic context, to communicate their ideas using modern internationally recognised professional language of economists.

	TOPIC	Total	Lectures	Classes	Self-study
Part 1. Core.					
1	Basic macroeconomics problems. Macroeconomic variables.	12	4	2	6
2	Goods market equilibrium. The role of the government in regulating business cycles	12	4	2	6
3	IS curve. Fiscal and redistribution policies in an economy with heterogenous agents	12	4	2	6
4	Expectations and microeconomic foundations of aggregate consumption and investment	16	4	2	10
5	Financial market equilibrium in the closed economy. LM-curve.	12	4	2	6
6	Fiscal and monetary policies in the IS-LM model	12	4	2	6
7	Labour market, wage and price determination. Unemployment	16	4	2	10
8	AD – AS model. Sticky prices, wages and information	16	4	2	10
9	Introduction to long-run economic dynamics.	20	6	4	10
Part 2. Open macroeconomics.					
10	Open economy macroeconomics: BOP, CIP, UIP, LOOP. IS-LM-BP model	16	4	2	10
11	Exchange rate determinations.	16	4	2	10
12	Macroeconomic policy in the open economy in the middle –run. AD-ERU-TB model	20	6	4	10
Part 3. Expectations, inflation and government debt.					
13	Inflation, expectations and Phillips curve.	18	6	2	10
14.	High inflation and debt accumulation.	18	6	2	10
	<b>TOTAL</b>	216	64	32	120

## Description of topics.

### Part 1. The core

#### 1. Basic macroeconomic problems and concepts. Macroeconomic variables

Macroeconomics and its central issues: inflation, unemployment, economic growth, stabilisation policy. The problem of aggregation. Aggregate output, gross domestic product, final good, intermediate good, value added. Nominal GDP and real GDP. GDP growth, expansions, recessions, stagnation. Labour force, employment, unemployment and unemployment rate, discouraged workers, participation rate. Underground economy. Price level, inflation, inflation rate, deflation, GDP deflator, index number, consumer price index (CPI), cost of living. Real vs. nominal variables. Interest rates. Main macroeconomic variables. National accounting identities. The legacy of macroeconomic issues. Historical cross-country dynamics of main economic variables.

**Required readings:**

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.1,2.

**Further Reading**

Blanchard, O. (2009). The State of Macro. Annual Review of Economics, 1, 209–228.

**2. Goods market equilibrium. The role of the government in regulating business cycles.**

The Great Depression and the birth of Macroeconomics. Keynes's General Theory. Objectives, instruments and the role of the government. The goods market and Keynesian Cross in the closed economy. Characterization of the equilibrium and the mechanism of adjustment. Autonomous aggregate expenditures, the economy wide marginal propensity to spend and the multiplier. Goods market equilibrium and the multiplier in the open economy. The effects of government spending and taxation on output. Government spending multiplier and tax multiplier. Balanced budget multiplier for different mechanisms of adjustment. Fiscal policy rules and the government budget constraint.

**Essential Reading**

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.3.

**Further Reading**

Mankiw, N. Gregory. "Imperfect competition and the Keynesian cross." *Economics Letters* 26.1 (1988): 7-13.

**3. IS curve. Fiscal and redistribution policies in an economy with heterogenous agents**

Goods' market equilibrium in the closed economy. Derivation of the IS curve. Shifts in the IS curve. Excess demand and supply on the goods markets. Heterogeneous agents and the total consumption function. Inequality, poverty, and transfer effects. Redistribution policy and poverty-driven inequality. Redistribution and poverty alleviation. Preferences for redistribution in the society. The increasing role of the government in the XX century and fiscal multipliers.

**Essential Reading**

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.3. 5.1.

**Further Reading**

Alberto F. Alesina, Silvia Ardagna.(2009) Large changes in fiscal policy: taxes versus spending. NBER Working Paper 15438/- <http://www.nber.org/papers/w15438>

**4. Expectations and microeconomic foundations of aggregate consumption and investment**

Keynesian consumption function and Kuznets puzzle. Intertemporal choice model. Life Cycle and Permanent Income theories. PIH under rational expectations. Barro-Ricardo equivalence. Reasons for the failure of Barro-Ricardian equivalence. Fiscal policy. Implications of Barro-Ricardo equivalence. Yield to maturity and term structure of interest rates. Stock market and the price of stock. Permanent income hypothesis and fundamental values of assets. Rational bubbles on financial markets. Keynesian theory on aggregate investment. The components of investment spending. Neoclassical model of investment. Accelerator models of investment. Tobin's q-theory

**Essential Reading**

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.14-16

### Further Reading

- Barro, Robert ‘Are government bonds net wealth?’, *Journal of Political Economy* 82(6) 1974, pp.1095–17.
- Friedman, Milton A theory of the consumption function. (Princeton, NJ: Princeton University Press, 1957).
- Hall, Robert, E. ‘Stochastic implications of the life cycle-permanent income hypothesis: theory and evidence’, *Journal of Political Economy* 86(6) 1978, pp.971–87.
- Modigliani, Franco ‘Life cycle, individual thrift, and the wealth of nations’, *American Economic Review* 76(3)1986, pp.297–313.

### 5. Financial market equilibrium in the closed economy. LM-curve.

Functions of Money: a Numeraire, Means of Exchange and Store of Value. The role of financial markets in macroeconomic dynamics. Demand for Liquid Assets. Liquidity Preference Approach. Central Bank, Commercial Banks and Supply of Liquid Assets. Money Base, Public Cash, Reserves, Deposits. Money Creation process. Money multiplier, deposit multiplier and loans multiplier. Upward sloping money supply. The transactions demand (Baumol-Tobin model). The speculative theory of money demand: demand for money as a safe asset. The modern quantity theory of money. The monetary base and the money supply. The money multiplier model. Control of the central bank over the money supply. Liquid Assets Market Equilibrium. Derivation of the LM curve. Slope of the LM schedule. Excess demand and Excess supply. Monetary Policy and Shifting in the LM schedule. Liquidity trap and zero lower bound.

### Essential Reading

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.4. 5.2.

### Further Reading

- Baumol W., The transaction demand for cash: an inventory theoretic approach, *Quarterly Journal of Economics*, 66, pp.545-556, 1952.
- Friedman M. (1968) “The Role of Monetary Policy”. *American Economic Review*, 58, pp. 1-17.
- Tobin J., Liquidity preference as a behaviour towards risk, *Review of Economic Studies*, 25, pp.65-86, 1958
- Hoshi T., A.K.Kashyap, Japan’s Financial Crisis and Economic Stagnation, *Journal of Economic Perspectives*, 18 (1), 2004, pp. 3-26.

### 6. Fiscal and monetary policies in the IS-LM model

Notion of general equilibrium in a macroeconomics context. Algebra and geometry of general equilibrium, IS-LM framework. Macroeconomic policies and output determination. Classical and Keynesian views. Expansionary and contractionary fiscal policy: tax financing, internal debt financing, borrowing from the central bank. Expansionary and contractionary monetary policy, policy mix. Strategic interaction between fiscal and monetary authorities. War of attrition in IS-LM framework.

### Essential Reading

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.5

### Further Reading

- Romer, David ‘Keynesian macroeconomics without the LM curve’, *Journal of Economic*

Perspectives 14(2) 2000, pp.149–69.

- Hutchison, Michael ‘Japan’s recession: Is the liquidity trap back?’ Federal Reserve Bank of San Francisco. FRBSF Economic Letter/Pacific Basin Notes. 2000–19, 16 June 2000 (available at [www.frbsf.org/econsrch/wklyltr/2000/el2000-19.html](http://www.frbsf.org/econsrch/wklyltr/2000/el2000-19.html)).

## **7. Labour market, wage and price determination. Unemployment**

Noninstitutionalized civilian population, labor force; out of the labor force, participation rate, unemployment rate, separations, hires, quits, layoffs, duration of unemployment, discouraged workers, nonemployment rate, collective bargaining, reservation wage, bargaining power. Efficiency wage theories, unemployment insurance, production function, labor productivity, markup, wage-setting relation, price-setting relation. Natural rate of unemployment, structural rate of unemployment, natural level of employment, natural level of output. The types and causes of unemployment: frictional, structural and classical (or real wage) unemployment. Hysteresis.

### *Essential Reading*

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.6

### *Further Reading*

- Ball, Laurence and N.G. Mankiw ‘The NAIRU in theory and practice’, *Journal of Economic Perspectives* 16(4) 2002, pp.115–36.
- Blanchard, O. ‘European unemployment: the evolution of facts and ideas’, NBER working paper, No. 11750, 2005.
- Davis, Steven J., R.J. Faberman and J. Haltiwanger ‘The flow approach to labor markets: new data sources and micro-macro links’, *Journal of Economic Perspectives* 20(3) 2006, pp.3–26.

## **8. AD – AS model. Sticky prices, wages and information**

Aggregate supply (AS) relation. The medium run AS curve and the long run AS curve. Explanations of the upward sloping medium run aggregate supply curve. Sticky wages (Keynesian) model. Classical workers’ misperception model, new Keynesian sticky price model, new classical imperfect information model of medium run AS. Expectations and the medium run AS. The aggregate demand curve. Explanations of the slope. Equilibrium in aggregate supply-aggregate demand model. Monetary and fiscal policy in the long run and in the medium run. Supply shocks, neutrality of money, stagflation, output fluctuations, business cycles, propagation mechanism.

### *Essential Reading*

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.7

### *Further Reading*

Lucas, Robert ‘Understanding business cycles’, in K. Brunner and A. Meltzer (eds) *Stabilization of the domestic international economy*. 5, pp.7–29. Also in Estrin, S. and A. Marin *Essential reading in economics*. (Basingstoke: Macmillan Press, 1995) first edition [ISBN 9780312125110] Chapter 16.

Zarnowitz, Victor ‘Theory and history behind business cycles: Are the 1990s the onset of a golden age?’ *Journal of Economic Perspectives* 13(2) 1999, pp.69–90.

## **9. Introduction to long-run economic dynamics.**

Kaldor’s (1963) stylized facts and new growth facts. Growth miracles and growth disasters. Factor accumulation, stability of the worldwide economic growth and cross-country income differences. Basic assumption of the Solow model. Neoclassical production function, constant

return to scale and Inada conditions. Dynamics of the model and the concept of the balanced growth path. Policy shocks and transition dynamics. Growth accounting. Absolute and conditional convergence. Convergence clubs and the identification problems with cross-country regressions: selection bias and measurement error. Saving and investment in growth regressions. Convergence and the dispersion of per capita income:  $\beta$ - and  $\sigma$ -convergence. The open economy Solow model. Implications of the Solow model for the international flows of capital. Nature of knowledge (non-rivalry and non-excludability) and determinants of its accumulation. Incentives for R&D and innovations. Opportunities for talented individuals and learning-by-doing. Economic growth fundamentals.

### *Essential Reading*

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.10-13

### *Further Reading*

- Romer, D. (2012). *Advanced Macroeconomics*. 4<sup>th</sup> edition, McGraw-Hill, Ch.1 pp. 6-27.
- Bosworth, Barry, and S. M. Collins 'Accounting for growth: comparing China and India', *Journal of Economic Perspectives* 22(1) 2008, pp.45–66.
- Romer, Paul M. 'The origins of endogenous growth', *Journal of Economic Perspectives* 8(1) 1994, pp.3–22.

## **Part 2. Open macroeconomics.**

### **10. Open economy macroeconomics: BOP, CIP, UIP, LOOP. IS-LM-BP model**

Balance of payments: current account, capital account and foreign reserves. Real and nominal exchange rate. Exchange rate determination and the money sector. Foreign exchange market, foreign currency reserves. Appreciation and depreciation of the exchange rate. Exchange rate regimes: fixed and flexible. Determinants of the trade balance and the Marshall–Lerner condition, the national income identity in an open economy. Uncovered and covered interest parity condition in the financial market, the law of one price. General equilibrium in an open economy and macroeconomic policies. Capital mobility vs. capital controls. Mundell-Fleming model. Determinants of the BP line, the BP slope under alternative assumptions about international capital mobility. Monetary and fiscal policies under fixed and flexible exchange rates with perfect, imperfect capital movements and no capital mobility. Impossible trinity.

### **Essential Reading**

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch. 18, 19 and 20.1–20.2., 21.

### **Further Reading**

- Dornbusch, R., S. Fischer and R. Startz *Macroeconomics*. (New York: McGraw-Hill, 2011) Chapters 12.1–12.3, 18.3 and 20.2, 21
- Mankiw, N. G. *Macroeconomics*. (Worth, 2012) Chapter 6, 13.
- Calvo, Guillermo A., and F.S. Mishkin. 'The mirage of exchange rate regimes for emerging market countries', *Journal of Economic Perspectives* 17(4) 2003, pp.99–118.
- Mann, Catherine L. 'Perspectives on the US current account deficit and sustainability', *Journal of Economic Perspectives* 16(3) 2002, pp.131–52.

### **11. Exchange rate determinations.**

Exchange rates and purchasing power parity. Purchasing power parity puzzle. Bubbles on currency markets. Monetary model of exchange rate fluctuations.. The role of expectations on

exchange rate formation. Excess volatility of exchange rate: the Dornbusch model of overshooting. Exchange rates puzzles.

### **Essential Reading**

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch. 18, 19 and 20.1–20.2., 21.

### **Further Reading**

Sarno, L., Taylor M. *The Economics of Exchange Rates*, Cambridge University Press, Ch. 3-4  
Rudiger Dornbusch (1976). "Expectations and Exchange Rate Dynamics". *Journal of Political Economy*. 84 (6): 1161–1176

"Dornbusch's Overshooting Model After Twenty-Five Years", 2001 analysis by Kenneth Rogoff, International Monetary Fund.

### **12. Macroeconomic policy in the open economy in the short- middle –and long run.**

Natural rate of unemployment in the open economy. The model WS-PS in the open economy. The ERU curve. Fiscal policy in the short and middle run in the open economy. AD-ERU-TB model and its applications for the analysis of macroeconomic policy, internal and external shocks. The demand and supply policy in the open economy. Nominal and real wage dynamics in the open economy.

### **Essential Reading**

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch. 18, 19 and 20.1–20.2., 21.

### **Further Reading**

Carlin, W. and D. Soskice (2006) *Macroeconomics: Imperfections, Institutions, and Policies*, Oxford University Press, Ch. 9-12

## **Part 3. Expectations, inflation and government debt.**

### **13. Inflation, expectations and Phillips curve. Political economy issues of inflation determination.**

Phillips curve, wage-price spiral, nominal rigidities, staggering of wage decisions. Modified, or expectations-augmented, or accelerationist Phillips curve. Nonaccelerating inflation rate of unemployment (NAIRU), wage indexation. Okun's law, normal growth rate, labor hoarding, adjusted nominal money growth, disinflation, sacrifice ratio, seignorage. Rational, myopic, adaptive expectations, perfect foresight. Lucas critique and credibility.

Theoretical foundation of inflation targeting policies, the time-inconsistency problem and the debate between precommitment and discretion in the context of monetary policy.

The implications of the main rules designed by macroeconomists for the conduct of monetary policy. Time inconsistency problem and its solutions: constitutional rules, reputation, delegation to an independent authority with different preferences/incentives (independent central banker).

### **Essential Reading**

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch. 8-9

### **Further Reading**

- Barsky R.B., L.Kilian, Oil and macroeconomy since the 1970s, *Journal of Economic Perspectives*, 18 (4), pp.115-134, 2004.
- Svensson L.E., Escaping from a liquidity trap and deflation: The foolproof way and others, *Journal of Economic Perspectives*, 17 (4), pp.145-166, 2003.
- Tobin J., Inflation and unemployment, *American Economic Review*, 62 (1), pp.1-18, 1972.

- Friedman M. (1968) “The Role of Monetary Policy”. *American Economic Review*, 58, pp. 1-17.
- Bernanke B.S., F.S.Mishkin, Inflation targeting: a new framework for monetary policy? policy, *Journal of Economic Perspectives*, 11(2), pp.97-116, 1997.
- Chari V., J.K.Patrick, Modern macroeconomics in practice: how theory is shaping policy, *Journal of Economic Perspectives*, 20(4), pp.3-28, 2006.
- Taylor J.B. An historical analysis of monetary policy rules, NBER working paper, w6768, 1998

## 14 High inflation and debt accumulation.

Determinants of seignorage, and the links between the budget deficit and inflation. The macroeconomic populism. Cagan model and hyperinflation trap. Debt accumulation and the transition to high inflation. Inflation-based Laffer curve. The role of inflation expectations in the transition to high inflation. Stabilization program and the condition of its success. The Ricardian equivalence proposition for the conduct of fiscal policy. theoretical underpinning of fiscal policy and the debate between the active or passive use of fiscal policy. Discretionary use of fiscal policy over time. War of attrition and debt stabilizations.

### *Essential Reading*

Blanchard, O. and D.R. Johnson. *Macroeconomics*. Ch.17, 23-26.

### *Further Reading*

- Alesina A., The political economy of the budget surplus in the United States, *Journal of Economic Perspectives*, 14(3), pp.3-19, 2000.
- Fisher S., R.Sahay, C.A.Vegh, Modern hyper- and high inflations, *Journal of Economic Literature*, 40(3), pp.837-880, 2002.
- Modigliani F., The monetarist controversy, or, should we forsake stabilization policies? *American Economic Review*, 67(2), pp. 1-17, 1997.
- Sargent T.J., N. Wallace, Rational Expectations and the Theory of Economic Policy, *Journal of Monetary Economics*, July 1976, pp.199-214.
- Taylor J.B. Reassessing discretionary fiscal policy, *Journal of Economic Perspectives*, 14(3), pp.21-36, 2000.

## 12. Reading List

### a. Required

Blanchard, O. and D.R. Johnson. *Macroeconomics*.

### b. Optional

Carlin, W. and D. Soskice (2006) *Macroeconomics: Imperfections, Institutions, and Policies*, Oxford University Press

Abel Andrew, Bernanke Ben. (2008) *Macroeconomics*. Sixth Edition. Pearson Education Inc.

Snowden, Wein (2005) *Modern Macroeconomics: its Origins, Developments and Current State*.

## 13. Grading System

The final grades consist of three parts

Essay –20%.

Quizzes based on Home assessments and lectures materials (two) – 15%.



Mid-term exam – 15%

Final exam – 50%.

Grades are rounded only once at the end of the course. For students, studying macroeconomics a whole academic year, the final grade for this course is 40% of the total grade.

#### **14. Guidelines for Knowledge Assessment**

##### **Quizzes**

Quizzes contains short questions about current materials provided on lectures.

##### **The essay**

The essay topic has to tackle an interesting and up to date macroeconomic issue discussed in respected general interest newspapers and magazines, such as The Economist, Wall Street Journal, Financial Times, Moscow Times, Ведомости, Коммерсантъ, etc. Do not take the case description from the academic journals or books.

The essay should provide evidence that student has critical thinking and is able to apply relevant theories to the analysis of real-life issues. In effect, this type of learning activity replicates the essence of the group work project but assess students individually. Presentation skills are also important but students now communicate their ideas in writing rather than in oral form.

The length of the essay is recommended to be about 2,000 words but can be less. Graphs and formulas are very welcomed if they are carefully explained and interpreted in the text.

##### **Mid-term and Final exams**

Mid-term and final exams includes four forms of assessments: short problems, yes-no questions (with explanations), case studies for analysis of critical thinking.

#### **15. Methods of Instruction**

The instructors use traditional methods of instruction by providing well-structured lectures with a lot of illustrations, problems and real case studies and discussing the materials on seminars. All materials can be downloaded on the course cite on [www. Piazza.com](http://www.Piazza.com)