Economics for Engineers

Code: MK3KOZMM04XX17-EN

ECTS Credit Points: 4

Evaluation: exam

Year, Semester: 1st year, 2nd semester

Its prerequisite(s): -

Further courses are built on it: Yes/No

Number of teaching hours/week (lecture + practice): 1+2

Topics:

Measuring Economic Output and National Income. The Keynesian Theory of consumption. The Government and Fiscal policy. Open Economy. Money market. The aggregate demand and aggregate supply. The labour market. Unemployment. Inflation.

Literature:

Compulsory: -

- Mankiw, Gregory: Principles of Economics. Fifth Edition. South-Western, Mason, USA, 2009. ISBN: 9780324589979.
- Mankiw, Gregory (2015): Principles of Economics. Study Guide. Seventh Edition. Cengage Learning, ISBN-13:978-1-285-86421-1.
- Judit T. Kiss (2014): Introduction to Macroeconomics for Engineers and Technical Managers. Debrecen University Press. ISBN: 978-963-318-416-5.

Recommended:

- K. E. Case – R. C. Fair – S. M. Oster (2012): Principles of Macroeconomics, Tenth Edition. Prentice Hall, ISBN 13: 978-0-13-139140-6.
- Samuelson P.A., Nordhaus W.D.: Economics, 18th edition, Academic Internet Publishers Inc., 2006. ISBN: 0072872055
- Parkin, M., Powell, M. & Matthews, K. (2008) Economics. 7th ed. Harlow: Addison Wesley. ISBN-13: 9780132041225
- Parkin, M (2005) Economics, 7th edn, Addision Wersley: Pearson. ISBN: 0321248449.

Schedule

1st week Registration week	
2nd week: **Lecture:** The Scope and Method of Economics Introduction to economics. The method of economics. Microeconomics and Macroeconomics. Models in Economics. Introduction to Macroeconomics. The components of the Macroeconomics. The circular flow Diagram. Market sectors. **Practice:** Calculation/team problems: The circular flow Diagram. Case study examination.	**3rd week:** **Lecture:** Measuring national output and national income (Gross Output, Gross Domestic Product, calculating GDP, real versus nominal GDP, the components of the GDP, the expenditure approach, the income approach, GDP deflator, Gross National Income, and Gross National Disposable income). Measuring the cost of living (GDP and Social Welfare, the Consumer Price Index, GDP deflator versus CPI, real and nominal interest rate). **Practice:** Calculation/team problems: The expenditure approach. The difference

	between real GDP and nominal GDP. Macroeconomic indicators.
4th week:	5th week:
Lecture: Market demand and supply, equilibrium. The Keynesian Theory of consumption, consumption function, marginal propensity to consume, planned investment, saving function, marginal propensity to saving, aggregate output, determination of equilibrium output, the multiplier, IS curve.	**Lecture:** The government and fiscal policy. Government purchases, taxes, disposable income, government budget deficit and surpluses, determination of equilibrium output, fiscal policy, the government spending multiplier, the tax multiplier. Average tax rate, tax wedge, and marginal tax rate.
Practice: Calculation/team problems: Market demand and supply, equilibrium. Two sector model.	**Practice:** Calculation/team problems: Fiscal policy and the equilibrium. Average tax rate, tax wedge, and marginal tax rate.
6th week:	7th week:
Lecture: Demand and supply in an open economy. Equilibrium output in an Open Economy, net exports. Imports and exports and Trade Feedback effect. Measurement of openness. Exchange rates.	**Lecture:** The meaning of money, the functions of money, measuring the supply of money. The creation of money, required reserve ratio. The money multiplier. Open market operations. Fisher effect (nominal and real interest rate). Banking system, Commercial banking.
Practice: Calculation/team problems: Demand and supply in an open economy. Equilibrium output in an Open Economy, net exports.	**Practice:** Calculation/team problems: The money multiplier. Fisher effect (nominal and real interest rate).
8th week: 1st drawing week	
9th week:	10th week:
Lecture: The demand for money. Supply and demand in the money market. The equilibrium interest rate. The LM curve. The equilibrium price-level.	**Lecture:** Aggregate demand curve and aggregate supply curve. The effects of a shift in aggregate demand, the Equilibrium. The IS-LM model. Fiscal and monetary policy.
Practice: Mid-Term Test I	**Practice:** Calculation/team problems: The demand for money. Supply and demand in the money market. The equilibrium interest rate.
11th week:	12th week:
Lecture: The demand for labour, the supply of labour. The labour force, working-age population, active and inactive population, labour participation rate. Supply curve and demand curve, equilibrium.	**Lecture:** Unemployment, the unemployment rate, the activity rate. Types of unemployment (voluntarily and involuntarily unemployment; structural, frictional and cyclical unemployment), Okun law. Social and economic effect.
Practice: Calculation/team problems: Examination of the fiscal and monetary policy.	**Practice:** Calculation/team problems: The labour force, working-age population, active and inactive population, labour participation rate.
13th week:	14th week:
Lecture: Inflation; (Price level, inflation rate, definition and measuring of inflation, types and causes of inflation, demand-pull inflation and cost-push inflation, The Philips	**Lecture:** Growth (sources of economic growth, human capital, education and

curve: unemployment rate and inflation rate). **Practice:** Calculation/team problems: Supply curve and demand curve, equilibrium. Disequilibrium in the labour market.	skills), Economic growth around the World. Sustainable development. **Practice:** Calculation/team problems: demand-pull inflation and cost-push inflation.
15th week: 2nd drawing week	

Requirements

A, for a signature:

Participation at practice classes is compulsory. Students must attend practice classes and may not miss more than three occasions during the semester. In case a student does so, the subject will not be signed and the student must repeat the course. Students can't take part in any practice class with another group. Attendance at practice classes will be recorded by the practice leader. Being late is equivalent with an absence. In case of further absences, a medical certification needs to be presented. Missed practice classes must be made up for at a later date, being discussed with the tutor.

During the semester there are two tests: the mid-term test on the 7th week and the end-term test on the 15th week. Students must sit for the tests.

B, for a grade:

The course ends in an **examination.**

The minimum requirement of the mid-term, the end-term test and the teamwork is 50% separately. Based on the score of the tests separately, the grade for the tests and the examination is given according to the following table:

The grade is given according to the following (score/grade): 0-49 % = fail (1); 50-62 % = pass (2); 63-75 % = satisfactory (3); 76-89 % = good (4); 90-100 % = excellent (5).

If the score of any test is below 50%, the student once can take a retake test of the whole semester material.

An offered grade: It may be offered for the students if the average of the mid-term test, end-term tests and the teamwork is at least good (4). The offered grade is the average of them.