

SYLLABUS

1. Data about the program of study

1.1	Institution	Technical University of Cluj-Napoca
1.2	Faculty	Faculty of Electrical Engineering
1.3	Department	Electrotechnics and Measurements
1.4	Field of study	Electrical Engineering
1.5	Cycle of study	Bachelor of Science
1.6	Program of study/ Qualification	Electrical System Cluj-Napoca in English language
1.7	Form of education	Full time
1.8	Subject code	23.00

2. Data about the subject

2.1	Subject name	Economics			
2.2	Course responsible/ lecturer	<i>Assoc.prof.ec.eng. Stoenoiu Carmen-Elena, PhD – Carmen.Stoenoiu@emd.utcluj.ro</i>			
2.3	Teachers in charge of Seminars/ Laboratory/ Project	<i>Asist.prof.eng.ec. Serban Florica Mioara, PhD – Florica.Serban@emd.utcluj.ro</i>			
2.4	Year of study	II	2.5 Semester	I	
				2.6 Type of assessment (<i>E – exam, C – colloquium, V – verification</i>)	C
2.7	Subject category	<i>DF – fundamental, DD – in the field, DS – specialty, DC – complementary</i>			DC
				<i>DI – compulsory, DO – elective, Dfac – optional</i>	DI

3. Estimated total time

3.1	Number of hours per week:	3	of which	3.2 Course	2	3.3 Seminar	1	3.3 Laboratory	-	3.3 Project	-
3.2	Total hours per semester	75	of which	3.5 Course	28	3.6 Seminar	14	3.6 Laboratory	-	3.6 Project	-
3.7 Individual study:											
(a) Manual, lecture material and notes, bibliography										26	
(b) Supplementary study in the library, online and in the field										3	
(c) Preparation for seminars/laboratory works, homework, reports, portfolios, essays										2	
(d) Tutoring										-	
(e) Exams and tests										2	
(f) Other activities										-	
3.8 Total hours of individual study <i>[sum (3.7(a) to 3.7(f))]</i>					33						
3.9 Total hours per semester <i>[sum of 3.4 and 3.8]</i>					75						
3.10 Number of credit points					3						

4. Prerequisites (where applicable)

4.1	Curriculum	-
4.2	Competences	-

5. Requirements (where appropriate)

5.1	For the course	Online/onsite
5.2	For the applications	Online/onsite

6. Specific competences

Professional competences	<ul style="list-style-type: none"> • Adequate use of fundamental knowledge of economic theory, concepts, theories, methods and tools specific to the field • Collection, processing, analysis and interpretation of economic data based on specific concepts, theories and methods • Grounding and proposing solutions for economic problems • The operationalization of material and monetary economic flows through the management and evaluation of economic phenomena • Locating and recording the types of risk and their implications in situations specific to the initiation and development of economic activities • The use of databases, information and knowledge in the application of managerial methods, techniques and procedures • Organization and participation in statistical research • Statistical analysis of socio-economic phenomena • Forecasting socio-economic phenomena • Statistical and econometric modelling of socio-economic phenomena • Management assistance in the decision-making process
Cross competences	<ul style="list-style-type: none"> • Knowledge, understanding, analysis and use of concepts, theories, principles and fundamental methods of investigation and prospecting specific to the market economy • Applying the principles, norms and values of professional ethics within the framework of one's own rigorous, efficient and responsible work strategy • Identifying roles and responsibilities in a multi-specialized team and applying effective communication and work techniques within the team • Knowledge, understanding, analysis and use of concepts, theories, principles and fundamental methods of investigation and design specific to the market economy • Identification of continuous training opportunities and effective utilization of learning resources and techniques for personal development. (ECTS) • Additional competence related to the knowledge and application of general principles and theories related to the market economy (SPE) • Knowledge, explanation and interpretation of ideas, processes, phenomena, states and trends specific to economic activities and the elaboration of reasoned value judgments at the micro and macroeconomic level

7. Expected learning outcomes

Knowledge	The student/graduate explains, uses, and interprets theoretical and experimental results from mathematics, physics, chemistry, economics, technical drawing, computer science, and engineering.
Abilities	The student/graduate applies modern project management, economic and decision-making techniques including in a multidisciplinary setting.
Responsibility and autonomy	The student/graduate works effectively as a member of the team or its leader.

8. Discipline objectives (based on specific competencies acquired)

8.1	General objective	Familiarization of students with fundamental economic notions specific to the economy. Presentation of the functioning mechanism of the market economy
8.2	Specific objectives	To correctly acquire the fundamental concepts and categories of the economy To identify the main relationships between economic phenomena and processes, their meaning and nature To develop basic analytical skills To develop argumentative skills

9. Contents

9.1. Course (Lectures)		Number of hours	Teaching methods	Additional remarks
1	Introduction to economic theory: Stages of evolution in the science of economics, Study object of economics, Methods. Economic activity and its role, Needs, requirements: classification, characteristics, Economic resources: definition, classification, Law of scarcity of resources: consequences, causes, Production possibilities curve/frontier.	2	Participatory lecture (online/onsite)	
2	The economic organization of society. The market economy system: Fundamental problems of organization; The commodity economy; Market: concept, typology; Contemporary market economy; Goods; Cardinal theory and ordinal theory of utility. Individual, total and marginal utility.	2		
3	Theory of demand: Definition of demand; Basic principles; The factors that influence it; The general demand curve; Expansion and contraction of the request; Modification of the application. Regressive curves; Elasticity of demand depending on the price of the commodity; Elasticity of demand according to other factors; The income and substitution effect.	2		
4	Theory of offer: Definition of offer; Basic principles; The factors that influence it; The general supply curve; Expansion and contraction of the offer; Modification of the offer. Regressive curves; Elasticity of supply.	2		
5	Price and market equilibrium: Introductory notes; The mechanism of the invisible hand; Applying the theory of supply and demand; Interdependence of markets; Adjusting the microeconomic balance; Consequences of state intervention in the economy; The role of the equilibrium price.	2		

6	Economic agents in the market economy: Company: typology, characteristics and functions of the company; Company size; Production factors: general elements; The combination of prod factors. Production functions; The manufacturer's best; Productivity of production factors.	2		
7	Market and market types: The general framework of competition; Perfect competition; Price formation on the market with perfect competition; Profit maximization.	2		
8	Monopoly market: Definition and assumptions of the model; The causes of the existence of the monopoly;	2		
	The demand and revenue curve of a monopoly; Total revenues, average revenues, marginal revenues; The equilibrium of the short-term monopoly market; Inefficiency of resource allocation; valuation of the net loss caused by the existence of the monopoly; Monopolistic pricing techniques; Regulation of natural monopolies; Monopsony and bilateral monopoly.			
9	Market with imperfect competition: Forms of manifestation of imperfect competition; Market with monopolistic competition; Oligopoly market.	2		
10	Cost theory. Profit: The economic content of the production cost; Typology and size of the costs; The relationships between the costs recorded in the short term; Long-term cost evolution; The concept of profit. Explanatory theories. Mass and rate of profit. Forms and functions; The break-even point and the closing point.	2		
11	Macroeconomic issues: Labor market; The money market. Interest; Financial market; Results of the activity at the macroeconomic level; Income, consumption, savings and investments.	2		
12	Economic growth: basic elements, measurement of economic growth, forms, theories, etc. Level of development. Macroeconomic policies. Investments: Accelerator - multiplier relationship.	2		
13	Inflation: Definition and measurement of inflation; The main causes of inflation; Forms of manifestation of inflation; Economic-financial effects of inflation; Measures to reduce inflation and combat its consequences.	2		
14	Unemployment: Its definition and measurement; Forms and types of unemployment; Causes of unemployment; Inflation-unemployment, economic growth-unemployment relationships; Measures to reduce unemployment and its effects.	2		

Bibliography

- [1] Abraham Frois Gilbert, Political Economy, Humanitas Publishing House, Bucharest, 1994.
 [2] Adam Smith, The Wealth of Nations, vol.1, RPR Academy Publishing House, Bucharest, 1962.
 [3] Albert Michel, Capitalism against capitalism, Bucharest, Humanitas, 1996.
 [4] Galbraith, J.K., Economic science and the public interest, Political Publishing House, Bucharest, 1982.
 [5] Lipsey R., Chrystal, K Alec, Positive economics, Economic Publishing House, Bucharest, 1999.
 [6] Lupan Mariana (Luntrașu) coord. - Globalization: visions, contexts, trends, Economic Publishing House, Bucharest, 2005.
 [7] Nicholson Walter, Microeconomic Theory, 6th Edition, Dryaden Press, 1995.
 [8] Popescu Gheorghe, Evolution of economic thought, George Barițiu Publishing House, Cluj-Napoca, 2000.
 [9] Samuelson P., Nordhaus, W.D., Political Economy, Teora Publishing House, Bucharest, 2000.
 [10] Stiglitz Joseph, Globalization, hopes and disillusions, Economic Publishing House, Bucharest, 2003.
 [11] Stiglitz Joseph E., Carl E. Walsh, Economics, Economic Publishing House, Bucharest, 2005

9.2. Applications - Seminar /Laboratory/Project		Number of hours	Teaching methods	Additional remarks
1	Economic indicators, rates of evolution, indices.	2	The exercise, the demonstration, the exemplification (online/onsite)	-
2	Rarity, the frontier of production.	2		
3	Utility, budget constraint, marginal rate of substitution. Indifference curves	2		
4	Production capacity. Productivity. The optimal production variant.	2		
5	Costs. Income. Result.	2		
6	Results of the activity at the macroeconomic level. Balance and imbalance	2		
7	Inflation and unemployment	2		

Bibliography

- [1] Angeles Coralia (coord.), Economy, Economic Publishing House, Bucharest, 2000.
 [2] Bodea Gabriela, Irina Ban, Economics, Risoprint Publishing House, Cluj-Napoca, 2010.
 [3] Braudel Fernand, Games of Exchange, Meridiane Publishing House, Bucharest, 1995.
 [4] Ciobanu Gh., (coord.), Microeconomy, Ardealul Publishing House, Cluj-Napoca, 2005.
 [5] Cocioc Paul, Fundamentals of economic science, Risoprint Publishing House, Cluj-Napoca, 2001.
 [6] Cocioc Paul (coord.), Microeconomy, Risoprint Publishing House, Cluj-Napoca, 2013.
 [7] Stoenoiu Carmen Elena, Serban Florica Mioara, Micro- and Macroeconomics-practical applications, UT Press Publishing House, Cluj-Napoca, 2019.

10. Alignment of course content with expectations of the epistemic community, professional associations, and representative employers in the field

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11. Assessment

Activity type	11.1 Assessment criteria	11.2 Assessment methods	11.3 Weight in the final grade (%)
11.4 Course	- Correct and complete assimilation of the concepts taught; - Logical coherence; - Degree of assimilation of specialized language; - The ability to use specific concepts, methods and procedures; - Attitudinal aspects: seriousness, interest in individual study, etc.	Written test	60%
11.5 Laboratory	-		
11.5 Project	- The ability to assimilate and apply in practice some economic notions and concepts - The ability to understand and solve case studies - The ability to interpret some economic effects, trends, ways of manifestation - Attitudinal aspects: seriousness, interest in individual study.	Report to be drawn up	40%
11.6 Minimum standard of performance: Obtaining grade 5 (course and applications).			

Date of completion	Lecturers	Title/ Surname/ Name:	Signature
01.10.2025	Course	Assoc.Prof.ec.eng. Carmen Elena STOENOIU, PhD	
	Applications Seminar/ Laboratory/ Project	Assist.Prof.eng.ec. Florica Mioara SERBAN, PhD	
		-	-

Date of approval in the ETHM Department Council January 2026	Head of Department: Prof. Eng. MICU Dan Doru, PhD
Date of approval in the Faculty of Electrical Engineering Council February 2026	Dean: Assoc. Prof. Eng. CZIKER Andrei, PhD