

SYLLABUS

1. Information about the program

1.1 Higher education institution	Politehnica University Timisoara
1.2 Faculty ¹ / Department ²	Chemical Engineering, Biotechnologies and Environmental Protection / Management
1.3 Field of study (name/code ³)	Chemical Engineering / 10.30.50
1.4 Study cycle	License
1.5 Study program (name/code/qualification)	Chemical Engineering / 10.30.50.60 / engineer

2. Information about the discipline

2.1 Name of discipline/ formative category ⁴	General Economy / DC						
2.2 Coordinator (holder) of course activities	Prof.dr.ec.ing.jur.Eugenia GRECU						
2.3 Coordinator (holder) of applied activities ⁵	Prof.dr.ec.ing.jur.Eugenia GRECU						
2.4 Year of study ⁶	II	2.5 Semester	4	2.6 Type of evaluation	D	2.7 Regime of discipline ⁷	DI

3. Total estimated time – hours / semester: direct teaching activities (fully assisted or partly assisted) and individual training activities (unassisted)⁸

3.1 Number of fully assisted hours / week	3 of which:	3.2 course	2	3.3 seminar / laboratory / project	1/0/0
3.1* Total number of fully assisted hours / semester	42 of which:	3.2* course	28	3.3* seminar / laboratory / project	14/0/0
3.4 Number of hours partially assisted / week	of which:	3.5 training		3.6 hours for diploma project elaboration	
3.4* Total number of hours partially assisted / semester	of which:	3.5* training		3.6* hours for diploma project elaboration	
3.7 Number of hours of unassisted activities / week	2.36 of which:	additional documentary hours in the library, on the specialized electronic platforms and on the field			
		hours of individual study after manual, course support, bibliography and notes			1.18
		training seminars / laboratories, homework and papers, portfolios and essays			1.18
3.7* Number of hours of unassisted activities / semester	33 of which:	additional documentary hours in the library, on the specialized electronic platforms and on the field			
		hours of individual study after manual, course support, bibliography and notes			16.5
		training seminars / laboratories, homework and papers, portfolios and essays			16.5
3.8 Total hours / week ⁹	5.36				
3.8* Total hours /semester	75				
3.9 Number of credits	3				

4. Prerequisites (where applicable)

¹ The name of the faculty which manages the educational curriculum to which the discipline belongs

² The name of the department entrusted with the discipline, and to which the course coordinator/holder belongs.

³ The code provided in HG - on the approval of the Nomenclature of fields and specializations / study programs, annually updated.

⁴ Discipline falls under the educational curriculum in one of the following formative disciplines: Basic Discipline (DF), Domain Discipline (DD), Specialist Discipline (DS) or Complementary Discipline (DC).

⁵ Application activities refer to: seminar (S) / laboratory (L) / project (P) / practice/training (Pr).

⁶ Year of studies in which the discipline is provided in the curriculum.

⁷ Discipline may have one of the following regimes: imposed discipline (DI) or compulsory discipline (DOb)-for the other fundamental fields of studies offered by UPT, optional discipline (DO) or optional discipline (Df).

⁸ The number of hours in the headings 3.1 *, 3.2 *, ..., 3.8 * is obtained by multiplying by 14 (weeks) the number of hours in headings 3.1, 3.2, ..., 3.8. The information in sections 3.1, 3.4 and 3.7 is the verification keys used by ARACIS as: $(3.1) + (3.4) \geq 28$ hours / wk. and $(3.8) \leq 40$ hours / wk.

⁹ The total number of hours / week is obtained by summing up the number of hours in points 3.1, 3.4 and 3.7.

4.1 Curriculum	•
4.2 Competencies	•

5. Conditions (where applicable)

5.1 of the course	•
5.2 to conduct practical activities	•

6. Specific competencies acquired through this discipline

Specific competencies	<ul style="list-style-type: none"> • Exposure of the basic concepts, theories and methods used in the coordination of economic systems and subsystems that have as their object of activity research, design and exploitation in chemical engineering
Professional competencies ascribed to the specific competencies	<ul style="list-style-type: none"> • - Analyse production processes for improvement; • - Manage chemical testing procedures; • - Test materials; • - Write technical reports • -Performs chemical experiments • -Approve engineering design • -Assess environmental impact

Transversal competencies ascribed to the specific competencies

- - Conduct quality control;
- - Apply scientific, technological and engineering knowledge;
- - Uses equipment, instruments or technological equipment accurately.

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7. Objectives of the discipline (based on the grid of specific competencies acquired - pct.6)

7.1 The general objective of the discipline	<ul style="list-style-type: none"> • • understanding the basic logic and functioning mechanisms of the market economy; • • familiarization with microeconomic fundamentals (costs, productivity, demand, supply, prices, profit, etc.); • • exposure of some very topical topics, such as the role of uncertainty and information; break-even analysis; • • the way consumers make decisions; • • how producers make decisions on different types of markets. • • the foundations of economic policy decisions;
7.2 Specific objectives	<ul style="list-style-type: none"> • • training the necessary skills for calculating costs, productivity, prices, profit, profitability threshold, etc; • • Understanding how a firm decides whether to increase or decrease the quantity produced or prices, if it is at the optimal point or if, on the contrary, it has to close its activity.

8. Content ¹⁰

8.1 Course	Number of hours	Teaching methods ¹¹
Chapter I The system of economic and social activities 1. Economic needs and resources; 2. The economic system and its structure.	2	exposition, conversation, explanation, example, comparative analysis
Chapter II Contemporary market economy 1. Types of economic systems; 2. Market economy: definition, features	2	
Chapter III Economic agents 1. Economic agents. Concept, typology; 2. Commercial companies.	2	
Chapter IV Production factors 1. System of production factors. 2. The factor of work, nature, capital, neofactories of production	2	
Chapter V Use of production factors 1. Combining production factors; 2. Production cost. Content, Function cost.	2	
Chapter VI Productivity of production factors 1. Forms of productivity; 2. Productivity of work, capital, natural factor.	2	
Chapter VII Economic goods. Their utility and value 1. Economic goods. Utility of goods; 2. Economic value.	2	
Chapter VIII Prices and the market mechanism 1. The content and functions of the price; 2. Formation of prices in the market economy	2	
Chapter IX The market, competition, demand and supply 1. Market and competition; 2. Demand and supply.	4	
Chapter X Currency and monetary circulation 1. Currency. Money supply and liquidity; 2. The value or purchasing power of money;	2	
Chapter. XI. Income theory. Salary, main form of income. 1. The labor market; 2. Salary. Establishing the size of the salary in the market economy.	2	
Chapter. XII. The profit. Interest rate. Rent. 1. The notion of profit; Profit indicators. 2. The money market and credit; Interest. Concept, indicators and forms; 3. Rent in the neoclassical theory and the new forms of rent.	4	
Bibliography ¹² 1) Eugenia Grecu- Elements of micro-macroeconomy, Eurobit Publishing House, Timisoara, 2008. -Course support, Virtual Campus Politehnica University of Timisoara, 2020 2) Viorel Cornescu. Gheorghe Crețoiu, Ion Bucur – Economy, Ed. All Beck, Bucharest, 2003. 3) A.S.E. Department of Economics and Economic Policies - Economics, Economica Publishing House, Bucharest, 2009.		
8.2 Applied activities ¹³	Number of hours	Teaching methods
1. Economic indicators; Theory of production factors Defining the object of study of economic theory. The types of reasoning used by economists are also considered, as well as some of the techniques used by them.	1	lecture, conversation, explanation, example, comparative analysis, simulation, case study, problem solving, brainstorming, project method
2. Production cost Short-term cost evolution Long-term production costs. Economies of scale.	2	

¹⁰ It details all the didactic activities foreseen in the curriculum (lectures and seminar themes, the list of laboratory works, the content of the stages of project preparation, the theme of each practice stage). The titles of the laboratory work carried out on the stands shall be accompanied by the notation "(*)".

¹¹ Presentation of the teaching methods will include the use of new technologies (e-mail, personalized web page, electronic resources etc.).

¹² At least one title must belong to the discipline team and at least one title should refer to a reference work for discipline, national and international circulation, existing in the UPT library.

¹³ Types of application activities are those specified in footnote 5. If the discipline contains several types of applicative activities then they are sequentially in the lines of the table below. The type of activity will be in a distinct line as: "Seminar:", "Laboratory:", "Project:" and / or "Practice/training".

3. Factor productivity. Labor productivity, the productivity of the capital factor and the natural factor	1	
4. Utility It is analyzed how the quantities of goods and services that consumers will demand at different price and income levels are determined.	1	
5. The market and competition. The price in the market economy. Demand and supply. The price. Perfect competition and imperfect competition	4	lecture, conversation, explanation, example, comparative analysis, simulation, case study, problem solving, brainstorming, project method
6. Salary The income of the marginal product of the labor factor. The value of the marginal product. Job offer. Establishing the equilibrium wage. Imperfections on the labor market. The influence of trade unions.	1	explanation, example, comparative analysis, simulation, case study, problematization, brainstorming, project method
7. Profit, interest and rent Calculation of total and unit profit, profit rates, simple and compound interest	4	lecture, conversation, explanation, example, comparative analysis, simulation, case study, problem solving, brainstorming, project method
Bibliography ¹⁴ 1. Eugenia Grecu- Economic journey- Applications of microeconomics, Ed. Solness, Timisoara, 2000; -Seminar support, Virtual Campus Politehnica University of Timisoara, 2020; 2. Viorel Cornescu (coordinator), Elena Druică, Radu Herman, Cornelia Nistor, Răzvan Papuc – Microeconomics, Seminar guide, Student Book Ed., Bucharest, 2008. 3. Diana Mihaela Apostol-Microeconomics - Syntheses, applications and case studies, University Publishing House, Bucharest, 2012		

9. Corroboration of the content of the discipline with the expectations of the main representatives of the epistemic community, professional associations and employers in the field afferent to the program

<ul style="list-style-type: none"> • We organized debates with representatives of commercial companies, but also with other teaching staff in the field, tenured in other higher education institutions, in order to identify the needs and expectations of employers in the field, as well as coordination with other similar programs within other educational institutions superior. Depending on the results of these debates, as well as through a feed-back mechanism, taking into account the reactions of employers in the field, we have permanently improved the structure of the courses and seminars in this discipline. We actively collaborated with the social environment, both in terms of the educational and research offer, as well as by participating in the development of local, regional or national development policies • INTERNATIONAL COMPATIBILITY • 1) MIT USA: Massachusetts Institute of Technology – discipline: economics, http://web.mit.edu/sfs/ (accessed on 05.10.2023) • 2) University of Cambridge – discipline: economics, http://www.cam.ac.uk/(accessed on 06.11.2023) • 3) American University of Athens – discipline: microeconomics, http://www.southeastern.edu.gr/(accessed on 07.11.2023)
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10. Evaluation

Type of activity	10.1 Evaluation criteria ¹⁵	10.2 Evaluation methods	10.3 Share of the final grade
10.4 Course	completeness and correctness of knowledge; logical coherence, fluency, expressiveness, force of argument; the ability to operate with	Written evaluation that ensures the uniformity of the subjects (in terms of scope and difficulty in particular) for the students subject to the evaluation, as well as the possibility of examining a larger number of students in the same unit of time; The written exam includes	50%

¹⁴ At least one title must belong to the discipline team.

¹⁵ Syllabus must contain the procedure for assessing the discipline, specifying the criteria, methods and forms of assessment, as well as specifying the weightings assigned to them in the final grade. The evaluation criteria shall be formulated separately for each activity foreseen in the curriculum (course, seminar, laboratory, project). They will also refer to the forms of verification (homework, papers, etc.)

	assimilated knowledge in complex intellectual activities; the ability to apply in practice, in different contexts, the knowledge learned; the capacity for analysis, personal interpretation, originality, creativity;	10 subjects, of which 5 are theoretical and 5 are applied; Summative assessment	
10.5 Applied activities	S: Grade along the way Np takes into account the grade from the seminar and attendance at the course and seminar;	Written evaluation that ensures the uniformity of the subjects (in terms of scope and difficulty in particular) for the students subject to the evaluation, as well as the possibility of examining a larger number of students in the same unit of time; At the seminar, students must pass 2 written papers. Diagnostic and formative evaluation.	50%
	L:		
	P¹⁶:		
	Pr:		
10.6 Minimum performance standard (minimum amount of knowledge necessary to pass the discipline and the way in which this knowledge is verified ¹⁷)			
<ul style="list-style-type: none"> • Written evaluation marked Ne in the form of the arithmetic mean of 2 written papers • • Ne= (L1+ L2) : 2 , where • • L1= grade from part 1 (chapters I-VI), • • L2= grade from part 2 (chapters VII-XII); • • It represents 50% of the final grade Nf • • The grade for the course activity Np is determined starting from the grade from the seminar Ns calculated as the arithmetic mean of 2 tests from the seminar • • Ns= (T1+ T2) : 2 • • T1= grade from part 1 of the seminar (related to chapters I-VI), • • T2= grade from part 2 of the seminar (related to chapters VII-XII); • • The grade for the activity along the way Np is given by the grade from the seminar Ns weighted with the attendance at the course and seminar and represents 50% of the final grade Nf • • Minimum requirements for promotion: Obtaining 50% of the total score • • Calculation of the final grade Nf= 0.5 Ne+ 0.5 By rounding the final score • • Minimum performance standard: Students will be able to understand how microeconomics is the basis of managerial decisions, as well as some public policy decisions. At the end of the course, they will be able to analyze costs, productivity, break-even, demand, supply and efficiency in different types of markets. They will also understand how to establish price policies, how decisions are made to make investments, as well as decisions related to actual production. 			

Date of completion

**Course coordinator
(signature)**

**Coordinator of applied activities
(signature)**

Prof.dr.ec.ing.jur. Eugenia GRECU

Prof.dr.ec.ing.jur. Eugenia GRECU

**Head of Department
(signature)**

Date of approval in the Faculty Council ¹⁸

**Dean
(signature)**

Ş.L.dr. Şerban MICLEA

Ş.L.dr.ing. Mircea Laurenţiu DAN

¹⁶ In the case where the project is not a distinct discipline, this section also specifies how the outcome of the project evaluation makes the admission of the student conditional on the final assessment within the discipline.

¹⁷ It will not explain how the promotion mark is awarded.

¹⁸ The endorsement is preceded by the discussion of the board's view of the study program on the discipline record.