

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
WEST UKRAINIAN NATIONAL UNIVERSITY

CONFIRMED:

Acting director of the B.D. Havrylyshyn
Institute of International Relations
Liudmyla HAVRYLIUK-YENSEN

“ 30 ”

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CONFIRMED:

Vice-rector for
Academic Affairs and Research
Viktor OSTROVERKHOV

“ 30 ”

2024



WORK PROGRAM
on discipline
“Macroeconomics”

Degree of higher education – Bachelor
Branch of knowledge – 07 Management and administration
Specialty – 073 Management
Educational and professional program – International Management

Department of Economics and Economic Theory

Form of study	Course	Semester	Lectures (hours)	Practical classes (hours)	Individual student's work (hours)	Training (hours)	Self-studies of students (hours)	Total (hours)	Exam (sem.)
Full-time	1	2	30	30	4	8	48	120	exam

30.08.2024

Ternopil – WUNU
2024

The work program is based on education and professional bachelor program of the branch of knowledge 07 Management and administration, specialty 073 Management, educational and professional program “International management” confirmed by the Academic Council of West Ukrainian National University (Protocol No 11 on 26.06.2024).

The work program was formed by:
Dr. Ec. Sc., Professor



Oleksandr DLUHOPOLSKYI

The work program was confirmed at the meeting of the Department of Economics and Economic Theory, protocol No 1 on 28.08.2024.

Chief of the Department of
Economics and Economic Theory,
Dr. Ec. Sc., Professor



Viktor KOZIUK

Reviewed and approved by group providing specialty 073 Management, protocol No 2 on 30.08 2024.

Chief of the group providing
specialty 073 Management,
Dr. Ec. Sc., Professor



Mykhalo SHKILNYAK

Guarantor of the
educational and professional program
“International Management”,
Dr. Ec. Sc., Professor



Olena SOKHATSKA

STRUCTURE OF WORKING PROGRAM OF COURSE “MACROECONOMICS”

1. DISCRIPTION OF COURSE “MACROECONOMICS”

Course of study – Macroeconomics	Direction, specialty, educational-qualification level	Description of course of study
Quantity of credits – ECTS - 5	Branch of knowledge – 07 Management and administration	Normative curse of cycle of natural- scientific and general-economic training Language – English
Quantity of test modules – 4	Specialty – 073 Management	Year of training – 1 Semester – 2
Quantity of content modules - 2	Educational-qualification level – bachelor	Lectures – 30 hours Seminar classes – 30 hours
Total quantity of hours - 120		Self-studies of students – 48 hours (training – 8) Individual student’s work – 4 hours
Weekly hours – 8 Lecture-hall hours – 4		Type of result test – exam

2. AIMS AND TASKS OF COURSE “MACROECONOMICS” STUDYING

2.1. PURPOSE OF COURSE STUDY

The focus of this course is on the theoretical and practical aspects of Macroeconomics. Students will learn theory and principles of macroeconomics, modern macroeconomic methods. Also, they will be given an opportunity to communicate effectively, to write academically competent material, to present arguments, to make macroeconomic analysis, to get their ideas across more quickly, to evaluate the impact economic policies have on businesses, to apply a variety of skills, methods, strategies to communicate in economic situations.

The course Macroeconomics is based on a range of topics which will be applied in business situations. The course is designed to teach students to work effectively as a group member in a variety of roles, to provide the skills required for development, preparation, investigation and presentation research projects, to use information technologies within a business environment. The students are suggested to improve their personal skills. Besides, this course suggests that students should be taught how to organize information from a variety of sources for various audiences and purposes and how to gain and practice various written skills.

2.2. TASKS OF COURSE STUDY

Upon successful competition, the student will be able to:

- demonstrate the knowledge and understanding concepts and principles of fundamentals of macroeconomics,
- evaluate critically the basic macroeconomics theories,

- apply, realize and integrate theoretical knowledge in practice,
- understand the key aspects and their relationships within and across the discipline.

2.3. BASIC PRACTICAL SKILLS (COMPETENCES)

№	Names of competencies	Description of competencies
1	General scientific	– have a basic knowledge of economic discipline "Macroeconomics"
2	General professional	<ul style="list-style-type: none"> – ability to use the acquired knowledge in fundamental and applied disciplines for solution of specific economic problems; – operating methodology of calculation of indicators of economic activity in the micro-economic, national and global levels and processing them for research, analytical and advisory needs; – ability to identify permanent economic interest to economic information of their profile and ownership of economic and organizational decision-making skills;
3	Specialized and professional	<ul style="list-style-type: none"> – ability to justify the need for introducing institutional changes at the macro levels; – knowledge of measuring basic macroeconomic indicators; – apply methods of macroeconomic analysis to the functioning of economic systems; – ability to apply their knowledge in practical and professional activities.

2.4. PREREQUISITES FOR STUDY THE DISCIPLINE

Prerequisite for studying the discipline are other disciplines that have being studied before, as: “Microeconomics”, “Mathematics”, “History of Economic Thought”, et.

2.5. RESULTS OF STUDY:

- analyze structural peculiarities of the economic system using macroeconomic indicators;
- discuss key macroeconomic concerns, including national income accounting, saving and investment, and market forces;
- describe the determinants of total output and the ways to measure nominal Gross Domestic Product (GDP) as well as real GDP;
- describe and differentiate among full employment and unemployment, forms of unemployment, and forms of inflation;
- explain different ways of computing the general movement in prices;
- describe the relationship between inflation and unemployment;

- explain the model of aggregate demand and aggregate supply;
- analyze a government's roles in the economy;
- evaluate how a government uses its fiscal policy and monetary policy to influence key variables in order to achieve economic growth, price stability, full employment, et.;
- describe the mechanics of money supply;
- evaluate the net gains arising from international trade.

3. PROGRAM OF COURSE

Theme 1. Introduction to Macroeconomics

What is Macroeconomics? Economics as a Discipline. The Need for Abstraction. Theory and Practice, Models and Reality.

What is an Economic Model? Principles and Functions of Macroeconomics.

The Genesis of Macroeconomics: the Macroeconomics of Keynes, the Monetarist Tradition, the New Classical School, the New Keynesian School, the School of Structuralism.

The Methodology of Macroeconomics. Positive and Normative Analysis. Macroeconomic Modeling and Forecasting.

Market Mechanisms (American, European and the Underdeveloped Countries Experience).

The Main Aims of Macroeconomics. The Transformation Curve.

Literature: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Theme 2. Macroeconomic Accounts

Measuring Macroeconomic Activity. Income and the Standard of Living (Welfare, Income Trends).

Definition of National Income. Three Methods on National Income Measurement. Real and Nominal Income. Gross National (*GNP*) and Gross Domestic Product (*GDP*). Output Measuring. Measuring Expenditure. The Relationship among Income, Output, Expenditure.

Problems in Measuring Income, Output and Expenditure directly.

Price Indexes and Interest Rates.

Literature: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Theme 3. Macroeconomic Equilibrium

Fighting the Invisible Hand. Demand and the Quantity Demanded. Supply and the Quantity Supplied. Equilibrium of Supply and Demand (*AD-AS* Model). Shifts of the Aggregate Demand Curve. Shifts of the Aggregate Supply Curve. *AD-AS* and the Multiplier. Implications of *AD-AS* Model

The Goods Market and the *IS* Curve. The *IS* Function. The Slope of the *IS* Curve. Shifts in the *IS* Curve. Significance of the *IS* Curve. Equilibrium in the Goods Market.

The Money Market and the *LM* Curve. Derivation of the *LM* Curve. The Slope of the *LM* Curve. Shifts in the *LM* Curve. Significance of the *LM* Curve. The Price Level, Nominal Interest Rates and Real Income as Determinants of Money Demand. The Money Supply Process. Money Supply Effects. General Equilibrium in the Money Market

Goods and Money Markets Together. The Complete *IS-LM* Model: Exercises. General Equilibrium with Flexible Prices. General Equilibrium with Sticky Prices. Keynesian and Neoclassical versions of the *IS-LM* Model. Comparative Static Analysis with the *IS-LM* Model. *IS-LM* Model with the Government Sector.

Demand and Supply in the Labor Market. Labor Supply and the Labor-Leisure Trade-off. Labor Demand, Productivity and Real Wages. Labor Market Equilibrium.

Literature: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Theme 4. Theory of Economic Growth

Why be Concerned about Economic Growth? Theories of Economic Growth.

Growth in the Neoclassical Model. The *R.Solow* Model of Economic Growth (Golden Rule).

Growth in the Keynesian Model. The Multiplier Process.

The New Keynesian Models of Economic growth. The simple Accelerator Principle. The *R.Harrod* and *E.Domar* Growth Model. *AK* Model

Comparative Growth. Sources of Economic Growth. Technical Progress and Productivity slowdown. Constraints on Growth. Economic Growth an Objective of Policy. Economic Growth and the Production Function.

Government Influence on Economic Growth. Economic Development and Economic Growth

Literature: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Theme 5. Economic Cycles, Employment and Inflation

Explaining the Cycle. The Multiplier-Accelerator Interaction. Four Parts of Macroeconomic Cycle. The Main Types of Economic Cycles.

Unemployment as a Problem of Low Economic Cycle. Unemployment Trends and Characteristics. Types of Unemployment (Frictional, Structural, Institutional, Seasonal and Cyclical Unemployment). The Natural Rate on Unemployment. The Full Employment Objective. *Okun's* Law: Output Growth and Changes of Unemployment. Unemployment Insurance

Inflation as a Problem of High Economic Cycle. Inflation: the Myth and the Reality. Measuring Inflation and Deflation. Inflation Trends. Demand-Pull and Cost-Push Inflation. Structuralist and Monetary Theories of Inflation. Empirical Evidence on the Determinants of Inflation. Inflationary Expectations. The Costs of Inflation. Inflation as a Tax. Economics and Social Effects of Inflation. Policies to Repressed Inflation. Policies to Deal with Inflation.

The Trade-off between Unemployment and Inflation (*Phillips* Curve in the Short-Run and Long-Run)

Literature: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Theme 6. Macroeconomic Policy

The Nature of Macroeconomic Policy. The micro-theoretic Foundations of Macroeconomic Policy. Does Macroeconomic Policy Really Matter? The New Classical and Keynesian Points of View on Macroeconomic Policy.

Stabilization Policy. The Economic System: Stable or Unstable? Static and Dynamic Stabilization

Fiscal Policy: Definitions and Role. Fiscal Rules. The Government Budget Constraint. Taxation. Functions of Taxes. Types of Taxes (Direct and Indirect Taxes, Regressive, Proportional and Progressive Taxation, Corporate and Property Taxes). Multipliers for Tax Policy. Planning Expansive Fiscal Policy. Planning Restrictive Fiscal Policy. National Debt

Monetary Policy: Definitions and Role. Which Monetary Target? Monetary Base Control. Narrow Effects of Money. Instruments of Monetary Policy. Issues and Trends in Monetary Policy.

The Relative Effectiveness of Monetary and Fiscal Policy.

Literature: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Theme 7. The Open Economy

Reasons for Engaging in International Trade. Gains from Trade. Advantages of Specialization. Law of Comparative Cost. Comparative advantage. Qualifications to Trade Theory. Terms of Trade Index. Protectionism and Free Trade Policy. Liberalization of Trade.

Importance of the Current Balance. The Balancing Item. Balance of Payments Equilibrium and Payments Deficit. Definition and Importance of the Exchange Rates. Increases and Decreases in the Exchange Rates. Determinations of the Exchange Rate. Effect on Import and Export Prices of Changes in the Exchange Rates. Purchasing Power Parity Theory. Characteristics of Floating Exchange Rates. Flexible-Exchange-Rate and Fixed-Exchange-Rate Regimes. Devaluation and Revaluation. The *Marshall-Lerner* Conditions. The *J*-Curve. Depreciation and Appreciation. Government Intervention in the Foreign Exchange Market and Exchange Rate Targets.

Models of the Open Economy: the Keynesian Model and the Neoclassical Model. The *IS-LM-BP* Model (*Mundell-Fleming* model).

Literature: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

4. STRUCTURE OF TEST CREDIT OF COURSE “MACROECONOMICS”

	Lectures	Seminar classes	Self-studies of students	Training	Individual students work	Control measures
Theme 1. <u>Introduction to Macroeconomics</u>	4	4	6		1	Surveys, testing, tasks
Theme 2. <u>Macroeconomic Accounts</u>	4	4	7		-	Surveys, testing, tasks
Theme 3. <u>Macroeconomic Equilibrium</u>	4	4	7		-	Surveys, testing, tasks
Theme 4. <u>Theory of Economic Growth</u>	4	4	7		1	Surveys, testing, tasks
Theme 5. <u>Economic Cycles, Employment and Inflation</u>	4	4	7		1	Surveys, testing, tasks
Theme 6. <u>Macroeconomic Policy</u>	4	4	7		-	Surveys, testing, tasks
Theme 7. <u>The Open Economy</u>	6	6	7		1	Surveys, testing, tasks
Total	30	30	48	8	4	

5. THE SCHEDULES OF SEMINARS

Hours	Themes	Reference material	Assignment
2	<p>Seminar 1: Introduction to Macroeconomics (Theme 1) <i>Aims</i> – formulate knowledge of fundamental principles of macroeconomics, macroeconomic process analysis <i>Key questions:</i> What is Macroeconomics? Economics as a Discipline. The Need for Abstraction. Theory and Practice, Models and Reality. What is an Economic Model? Principles and Functions of Macroeconomics. The Genesis of Macroeconomics: the Macroeconomics of Keynes, the Monetarist Tradition, the New Classical School, the New Keynesian School, the School of Structuralism Group dynamics</p>	Handouts	Personal profiles Major project
2	<p>Seminar 2: Introduction to Macroeconomics (Theme 1) <i>Aims</i> – formulate knowledge of fundamental principles of macroeconomics, macroeconomic process analysis <i>Key questions:</i> The Methodology of Macroeconomics. Positive and Normative Analysis. Macroeconomic Modeling and Forecasting. Market Mechanisms (American, European and the Underdeveloped Countries Experience). The Main Aims of Macroeconomics. The Transformation Curve. Exercises</p>	Handouts	Journal
2	<p>Seminar 3: Macroeconomic Accounts (Theme 2) <i>Aims</i> – formulate knowledge about principles of national accounting system, methodology of macroeconomic indicators calculating <i>Key questions:</i> Measuring Macroeconomic Activity. Income and the Standard of Living (Welfare, Income Trends). Definition of National Income. Three Methods on National Income Measurement. Real and Nominal Income. Gross National (<i>GNP</i>) and Gross Domestic Product (<i>GDP</i>). Output Measuring. Measuring Expenditure. The Relationship among Income, Output, Expenditure. Exercises</p>	Handouts	Journal
2	<p>Seminar 4: Macroeconomic Accounts (Theme 2) <i>Aims</i> – formulate knowledge about principles of national accounting system, methodology of macroeconomic indicators calculating <i>Key questions:</i> Problems in Measuring Income, Output and Expenditure directly. Price Indexes and Interest Rates.</p>	Handouts	Journal

	Exercises		
2	<p>Seminar 5: Macroeconomic Equilibrium (Theme 3) <i>Aims</i> – analyze theoretical principles of building economic equilibrium models in a short-run and long-run on goods, money and labor markets <i>Key questions:</i> Fighting the Invisible Hand. Demand and the Quantity Demanded. Supply and the Quantity Supplied. Equilibrium of Supply and Demand (<i>AD-AS</i> Model). Shifts of the Aggregate Demand Curve. Shifts of the Aggregate Supply Curve. <i>AD-AS</i> and the Multiplier. Implications of <i>AD-AS</i> Model. Demand and Supply in the Labour Market. Labour Supply and the Labour-Leisure Trade-off. Labour Demand, Productivity and Real Wages. Labour Market Equilibrium Exercises</p>	Handouts	Journal
2	<p>Seminar 6: Macroeconomic Equilibrium (Theme 3) <i>Aims</i> – analyze theoretical principles of building economic equilibrium models in a short-run and long-run on goods, money and labor markets <i>Key questions:</i> The Goods Market and the <i>IS</i> Curve. The <i>IS</i> Function. The Slope of the <i>IS</i> Curve. Shifts in the <i>IS</i> Curve. Significance of the <i>IS</i> Curve. Equilibrium in the Goods Market. The Money Market and the <i>LM</i> Curve. Derivation of the <i>LM</i> Curve. The Slope of the <i>LM</i> Curve. Shifts in the <i>LM</i> Curve. Significance of the <i>LM</i> Curve. The Price Level, Nominal Interest Rates and Real Income as Determinants of Money Demand. The Money Supply Process. Money Supply Effects. General Equilibrium in the Money Market. Goods and Money Markets Together. The Complete <i>IS-LM</i> Model: Exercises. General Equilibrium with Flexible Prices. General Equilibrium with Sticky Prices. Keynesian and Neoclassical versions of the <i>IS-LM</i> Model. Comparative Static Analysis with the <i>IS-LM</i> Model. <i>IS-LM</i> Model with the Government Sector Exercises</p>	Handouts	
2	<p>Seminar 7: Theory of Economic Growth (Theme 4) <i>Aims</i> – formulate knowledge about roots, factors and types of economic growth, economic growth models <i>Key questions:</i> Why be Concerned about Economic Growth? Theories of Economic Growth. Growth in the Neoclassical Model. The <i>R.Solow</i> Model of Economic Growth (Golden Rule). Growth in the Keynesian Model. The Multiplier Process. The New Keynesian Models of Economic growth. The simple Accelerator Principle. The <i>R.Harrod</i> and <i>E.Domar</i> Growth Model. <i>AK</i> Model.</p>	Handouts	Journal

	<p>Explaining the Cycle. The Multiplier-Accelerator Interaction. Four Parts of Macroeconomic Cycle. The Main Types of Economic Cycles.</p> <p>Unemployment as a Problem of Low Economic Cycle. Unemployment Trends and Characteristics. Types of Unemployment (Frictional, Structural, Institutional, Seasonal and Cyclical Unemployment). The Natural Rate on Unemployment. The Full Employment Objective. <i>Okun's Law</i>: Output Growth and Changes of Unemployment.</p> <p>Unemployment Insurance</p> <p>Exercises</p>		
2	<p>Seminar 8: Theory of Economic Growth (Theme 4)</p> <p><i>Aims</i> – formulate knowledge about roots, factors and types of economic growth, economic growth models</p> <p>Key questions:</p> <p>Comparative Growth. Sources of Economic Growth. Technical Progress and Productivity slowdown. Constraints on Growth. Economic Growth an Objective of Policy. Economic Growth and the Production Function.</p> <p>Government Influence on Economic Growth. Economic Development and Economic Growth.</p> <p>Exercises</p>	Handouts	Journal
2	<p>Seminar 9: Economic Cycles, Employment and Inflation (Theme 5)</p> <p><i>Aims</i> – formulate knowledge about roots of economic cycles, peculiarities of inflation and unemployment problems, vectors of ant inflation policy and employment policy</p> <p>Key questions:</p> <p>Explaining the Cycle. The Multiplier-Accelerator Interaction. Four Parts of Macroeconomic Cycle. The Main Types of Economic Cycles.</p> <p>Unemployment as a Problem of Low Economic Cycle. Unemployment Trends and Characteristics. Types of Unemployment (Frictional, Structural, Institutional, Seasonal and Cyclical Unemployment). The Natural Rate on Unemployment. The Full Employment Objective. <i>Okun's Law</i>: Output Growth and Changes of Unemployment.</p> <p>Unemployment Insurance.</p> <p>Presentation</p>	Handouts	Journal
2	<p>Seminar 10: Economic Cycles, Employment and Inflation (Theme 5)</p> <p><i>Aims</i> – formulate knowledge about roots of economic cycles, peculiarities of inflation and unemployment problems, vectors of ant inflation policy and employment policy</p> <p>Key questions:</p> <p>Inflation as a Problem of High Economic Cycle. Inflation: the Myth and the Reality. Measuring Inflation and Deflation. Inflation Trends. Demand-Pull and Cost-Push Inflation.</p>	Handouts	Journal

	<p>Structuralist and Monetary Theories of Inflation. Empirical Evidence on the Determinants of Inflation. Inflationary Expectations. The Costs of Inflation. Inflation as a Tax. Economics and Social Effects of Inflation. Policies to Repressed Inflation. Policies to Deal with Inflation. The Trade-off between Unemployment and Inflation (<i>Phillips Curve</i> in the Short-Run and Long-Run). Presentation</p>		
2	<p>Seminar 11: Macroeconomic Policy (Theme 6) <i>Aims</i> – formulate knowledge about meaning of fiscal policy, monetary policy, develop skills of budget deficit and public debt analysis, monetary instruments analysis <i>Key questions:</i> The Nature of Macroeconomic Policy. The micro-theoretic Foundations of Macroeconomic Policy. Does Macroeconomic Policy Really Matter? The New Classical and Keynesian Points of View on Macroeconomic Policy. Stabilization Policy. The Economic System: Stable or Unstable? Static and Dynamic Stabilization. Fiscal Policy: Definitions and Role. Fiscal Rules. The Government Budget Constraint. Taxation. Functions of Taxes. Types of Taxes (Direct and Indirect Taxes, Regressive, Proportional and Progressive Taxation, Corporative and Property Taxes). Multipliers for Tax Policy. Planning Expansive Fiscal Policy. Planning Restrictive Fiscal Policy. National Debt Presentation</p>	Handouts	Journal
2	<p>Seminar 12: Macroeconomic Policy (Theme 6) <i>Aims</i> – formulate knowledge about meaning of fiscal policy, monetary policy, develop skills of budget deficit and public debt analysis, monetary instruments analysis <i>Key questions:</i> Fiscal Policy: Definitions and Role. Fiscal Rules. The Government Budget Constraint. Taxation. Functions of Taxes. Types of Taxes (Direct and Indirect Taxes, Regressive, Proportional and Progressive Taxation, Corporative and Property Taxes). Multipliers for Tax Policy. Planning Expansive Fiscal Policy. Planning Restrictive Fiscal Policy. National Debt. Monetary Policy: Definitions and Role. Which Monetary Target? Monetary Base Control. Narrow Effects of Money. Instruments of Monetary Policy. Issues and Trends in Monetary Policy. The Relative Effectiveness of Monetary and Fiscal Policy Exercises</p>	Handouts	Journal

2	<p>Seminar 13: The Open Economy (Theme 7) <i>Aims</i> – formulate knowledge about definition and role of international trade, structure of exchange market, peculiarities of BOP accounting <i>Key questions:</i> Reasons for Engaging in International Trade. Gains from Trade. Advantages of Specialization. Low of Comparative Cost. Comparative advantage. Qualifications to Trade Theory. Terms of Trade Index. Protectionism and Free Trade Policy. Liberalization of Trade. Importance of the Current Balance. The Balancing Item. Balance of Payments Equilibrium and Payments Deficit. Definition and Importance of the Exchange Rates. Increases and Decreases in the Exchange Rates Exercises</p>	Handouts	Journal
2	<p>Seminar 14: The Open Economy (Theme 7) <i>Aims</i> – formulate knowledge about definition and role of international trade, structure of exchange market, peculiarities of BOP accounting <i>Key questions:</i> Models of the Open Economy: the Keynesian Model and the Neoclassical Model. The <i>IS-LM-BP</i> Model (<i>Mundell-Fleming</i> model). Exercises</p>	Handouts	Journal
2	<p>Seminar 15: The Open Economy (Theme 7) <i>Aims</i> – formulate knowledge about definition and role of international trade, structure of exchange market, peculiarities of BOP accounting <i>Key questions:</i> Determinations of the Exchange Rate. Effect on Import and Export Prices of Changes in the Exchange Rates. Purchasing Power Parity Theory. Characteristics of Floating Exchange Rates. Flexible-Exchange-Rate and Fixed-Exchange-Rate Regimes. Devaluation and Revaluation. The <i>Marshall-Lerner</i> Conditions. The <i>J</i>-Curve. Depreciation and Appreciation. Government Intervention in the Foreign Exchange Market and Exchange Rate Targets BOP accountings End course</p>	Handouts	Journal

6. INDEPENDENT WORK OF STUDENTS

10 variants and 2 tasks.

Task 1. Built open economy model and find all indicators.

Варіанти / Varianten / Variants	Показники / Kennziffer / Indicators										
	Y^b	D	Y^n	C	S	I^b	I^n	X	M	$Z_{i \rightarrow a}$	$Z_{a \rightarrow i}$
1	80			50	20			20	10	25	20
2		10	80	60				15	5	25	20
3	100	10		70				20	10	10	5
4		10	100	80				15	10	15	10
5	160	15		100				25	10	10	5
6		15	135	105				20	15	15	10
7		20		120	60			20	5	25	10
8		15	180	130				25	10	15	20
9	180	20		140				20	10	10	5
10	230		210	170				20	5	20	15

	Deutsch	English	Українська
C	volkswirtschaftlicher Konsum	Consumption	споживання домогосподарств
D	Abschreibungen	Depreciation	амортизаційні відрахування
I^b	Bruttokapitalanlagen	brute Invests	валові інвестиції
I^n	reale Investitionen	net Invests	чисті інвестиції
M	Einfuhr	Import	імпорт
X	Ausfuhr	Export	експорт
S	Ersparnisse	Savings	заощадження
Y^b	Bruttonationaleinkommen in Marktpreisen	Gross Domestic Product	валовий суспільний продукт в ринкових цінах
Y^n	Nettonationaleinkommen in Marktpreisen	Net Domestic Product	чистий суспільний продукт в ринкових цінах
$Z_{i \rightarrow a}$	das einkommen ins Ausland	Transfers send abroad	трансферти, відправлені за кордон
$Z_{a \rightarrow i}$	das einkommen aus Ausland	Transfers received from abroad	трансферти, отримані з-за кордону

Task 2. Calculate GDP using all methods.

Варіанти / Varianten / Variants	1	2	3	4	5	6	7	8	9	10
1. Der Wert der Warenherstellung / Вартість виготовленої продукції / Cost of manufactured products	180	200	220	240	260	280	300	320	340	360
2. Der Rohstoffwert / Вартість сировини і матеріалів / Cost of row materials	100	100	120	120	150	140	160	160	180	190
3. Die Abschreibungen / Амортизація / Depreciations	5	6	6	7	7	7	7	8	8	8
4. Der Lohn / Оплата праці / Remuneration	45	50	55	60	65	70	75	80	85	90
5. Das Natureinkommen der Bevölkerung / Натуральний дохід населення / Natural income of households	15	15	15	15	15	15	15	10	10	10
6. Die Konsumausgaben / Витрати на споживання / Consumption	50	55	60	65	70	75	80	85	90	95
7. Die Dienstleistungbezahlung / Оплата послуг / Service payments	5	5	5	6	6	6	6	8	7	8
8. Die Ersparnisse / Заощадження / Savings	0	2	3	5	7	5	6	5	5	10
9. Sozialversicherung / Соціальне страхування / Social insurance	10	10	11	10	10	12	10	15	15	20
10. Pensionsfonds / Пенсійний фонд / Pension Fund	1	1	1	1	2	2	2	4	3	3
11. Das Betriebseinkommen / Прибуток підприємств / Income of firms	15	12	15	17	15	15	15	20	19	20
12. Der Gewinn aus Eigentum / Прибуток від власності / Property profit	10	9	10	8	10	5	5	5	5	7
13. Dividende / Дивіденти / Dividends	5	5	5	5	5	5	5	7	7	7
14. Indirekten Steuer / Прямі податки / Indirect taxes	20	21	22	23	24	25	26	28	30	32
15. Die Subvention / Субвенції / Subventions	14	12	12	10	12	10	10	10	10	10
16. Die Investition / Інвестиції / Invests	2	3	3	3	3	3	3	3	3	3
17. Die Ausgaben der Staatseinrichtungen / Витрати державних установ / Public institutions expenditures	14	15	14	16	16	16	18	17	18	20

18. Erhöhung der Produktions vorräte / Збільшення виробничих запасів / Increase in inventory	3	4	4	4	4	3	3	3	3	3
19. Das Kaufen der Betriebsanlage / Придбання устаткування і обладнання / Purchase of equipment and machinery	6	8	8	8	8	5	5	4	5	5
20. Ausfuhr / Експорт / Export	4	4	4	5	4	4	6	6	6	6
21. Einfuhr / Імпорт / Import	2	2	2	2	2	4	4	4	4	4
22. Das Einkommen aus Ausland / Доходи, отримані з-за кордону / Income received from abroad	18	20	22	24	26	28	30	32	34	36
23. Das Einkommen ins Ausland / Доходи, відправлені за кордон / Income send abroad	6	12	18	24	30	36	42	40	38	36

7. TRAINING ON COURSE “MACROECONOMICS”

The aim of fulfillment of training is successful mastering of course studying that demands the meaning-fullness of studied phenomena and the independent self-preparation to skill mastering under teacher management. For its achievement the next tasks are resolved:

- further acquirement of logical thinking skill and independent exposition of material;
- fixing students theoretical knowledge about economic subjects behavior in market conditions;
- acquirement of methods of optimal economic decision-making in the concrete situation.
- forming of independent work skill.

The choice of individual work topic is determined by teacher. The term of demise and defense of individual work is conditioned in accordance with working program. The mark is the part of result exam module.

The process of studying provides conducting of lectures and seminar lessons, self-studying of students, fulfillment of individual-research task under teacher guidance and independently. The language of teaching – English.

Teaching methods to be used:

- lectures – discourses given before the students upon a given subject, usually for the purpose of instruction;
- tutorials – individual instructions given by a tutor to students;
- classroom workshops – meetings for discussion, study, experiment;
- discussions – disquisitions in which a subject is treated from different sides, arguments with a view to elicit truth or establish a point;

•team work – work done by persons working as a team, that is, associated in some joint action;

•group projects – exercises in which students are required to study a topic, in co-operation on the basis of observations, books etc., for a period of one or two weeks;

•students' presentations – actions offering something for acceptance;

•directed study – the one comprehensive learning pack will include various activities that students must work through individually or in groups;

•in-class and out-of-class written assignments – exercises which are to be done in classroom or at home.

In the studying process the next methods of marking of students' work are used: current inquiry; final testing on content module; marking of individual scientific-research task; written rector test work; written exam work.

TOPICS (Part 1)

1. Government Influence on Economic Growth and Economic Development
2. Technological Progress and Economic Growth
3. Globalization and National Economy
4. Technological Progress and Unemployment
5. National Bank and Monetary Policy
6. Role of Government in a Mixed Economy
7. Connections between Budget Deficit and Public Debt
8. Fiscal policy and Tax system.
9. Real sector: definition, main players, objectives.
10. National income and Product accounts (NIPA).
11. GDP and GNI. Income approach to measure GDP.
12. GDP and GNI. Expenditure approach to measure GDP.
13. GDP and GNI. Product (value added) approach to measure GDP.
14. Measuring domestic output. Real and nominal GDP. GDP-deflator.
15. Inflation: definition, types and problems of regulation. CPI and GDP-deflator.
16. Unemployment: definition, types and problems of regulation. Phillips Curve and Okun's Law.
17. Private consumption and private investment.
18. External sector: definition, objectives. Inter-temporal and intra-temporal decisions.
19. BOP accounting: principles, types of transactions.
20. The current account. Primary and secondary income.
21. The financial account. Direct and portfolio investments.
22. IIP accounting: structure and changes.
23. Balances and their interpretations: trade balance, current account balance, overall balance.

24. Debt indicators: stock of external debt, implicit interest rate, roll-over rate, average maturity.
25. Exchange rate and trade balance.
26. Government sector: definition, objectives. GFS accountings.
27. Structure of public sector. Main government operations.
28. Fiscal balances and indicators of the fiscal position.
29. Monetary and financial sector: definition, objectives. Monetary statistics.
30. Role and functions of Central Bank.
31. Role and functions of Commercial, Merchant and Cooperative banks.
32. Money supply. Effects of money multiplier.
33. Money demand. Functions of money. Monetary aggregates.
34. Seigniorage and inflation tax.
35. Interrelations among macroeconomic accounts.

Research (Part 2)

1. Based on NBU balance of payments, macroeconomic, monetary and banking statistics (www.bank.gov.ua) and data of Ministry of Finance of Ukraine (www.minfin.gov.ua) make an assessment of imbalances in the budget sector of Ukraine and determine ways to overcome them. All results you should arrange and serve as an analytical note.
2. Based on NBU data (www.bank.gov.ua) on monetary and banking statistics make a retrospective analysis of the inflation process in Ukraine during 2000-2024 and justify the choice of an optimal monetary regime in Ukraine. All results you should arrange and serve as an analytical note.

8. ASSESSMENT TOOLS AND METHODS FOR DEMONSTRATING THE RESULTS OF STUDY

In the process of study the discipline “Macroeconomics” the following methods of evaluation of students’ work are used:

- standard tests;
- current poll;
- modular testing and poll;
- scoring unit testing and interviews;
- evaluation of performance of integrated practical individual task;
- presentations of results of students’ researches;
- final exam;
- other.

9.CRITERIA, FORMS OF ONGOING AND FINAL CONTROL

The final score (on a 100-point scale) the discipline “Macroeconomics” is defined as a weighted average, depending on the proportion of each component of test credit.

Module 1		Module 2		Module 3	Module 4	Module 5
10 %	10 %	10 %	10 %	5 %	15 %	40 %
Current assessment	Modular control 1	Current assessment	Modular control 2	Training	Independent work of students	Exam
The grade for the current assessment is defined as the arithmetic average of the grades received during classes (3 topics - from 3 to 4 grades)	The grade for Modular control 1 is given on the basis of the completion of modular work on topics 1–3 (testing, theoretical questions, tasks)	The grade for the current assessment is defined as the arithmetic average of the grades received during classes (4 topics - from 4 to 5 grades)	The grade for Modular control 2 is assigned based on the completion of modular work on topics 4–7 (testing, theoretical questions, tasks)	The grade for the training is defined as the arithmetic average of the grades received for completing the tasks during the training	Evaluation of the task of independent work of students	2 theoretical questions = 20 points each of them; 2 tasks = 30 points for each of them.

Scale of marking:

For scale of WUNU	For national scale	For ESCT scale
90 – 100	Excellent	A (excellent)
85 – 89	Well	B (very well)
75 – 84		C (well)
65 – 74	Satisfactory	D (satisfactory)
60 – 64		E (adequately)
35 – 59	Unsatisfactory	FX (unsatisfactory with possibility of repeated passing)
1 – 34		F (unsatisfactory without possibility of repeated passing)

10. THE LIST OF VISUAL MATERIALS AND GUIDANCE

No	Name	Theme number
1.	Basic information technology software: MS Office, telecommunications software (Opera, Google Chrome, Firefox)	1-7
2.	View Sonic PJ 7223 projector	1-7

11. RECOMMENDED LITERATURE

1. McDonnell, C., Brue, S., Flynn, S. *Macroeconomics: Principles, Problems, and Policies*. 20th Edition. 600 p.
2. Collier, P. *The Future of Capitalism: Facing the New Anxieties*, 2018.
3. Krugman, P., Wells, R. *Macroeconomics*, 2021.
4. Kessler, S. *Gigged: The Gig Economy, the End of the Job, and the Future of Work*, 2018.
5. Bacchus, J. *The Willing World: Shaping and Sharing a Sustainable Global Prosperity*: Cambridge University Press, 2018. 524 p.
6. Larraín F. B. *Macroeconomics*: MIT Press, 2020. 296 p.
7. Kovtoniuk, K., Molchanova, E., Dluhopolskyi, O., Weigang, G., Piankova O. The factors' analysis of influencing the development of digital trade in the leading countries. 11th International Conference on Advanced Computer Information Technologies (September 15-17, 2021). Deggendorf, Germany, 290-293.
8. Zhylynska, O., Bazhenova, O., Zatonatska, T., Dluhopolskyi, O., Bedianashvili, G., Chornodid, I. Innovation processes and economic growth in the context of European integration. *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration*, 2020, Vol.28(3), 1-12.
9. Giedratis, V., Sofiienko, A., Zatonaska, T., Bazhenova, O., Dluhopolskyi, O. The impact of Ukraine's external public debt on the country's key macroeconomic indicators. *Financial and credit activity: problems of theory and practice*, 2020, Vol.3(34), 219-229.
10. Martyniuk, V., Dluhopolskyi, O., Kniaz, S., Podolchak, N., Muravska, Y., Martyniuk, B. The fiscal policy impact on indicators of the state's economic growth. 10th International Conference on Advanced Computer Information Technologies (16-18 September 2020). Deggendorf, Germany, 695-698.