AL-FARABI KAZAKH NATIONAL UNIVERSITY

Approved at the meeting
Academic Committee of
Al-Farabi KazNU
Vice Rector for Academic Affairs
_____ Khikmetov A.Қ.
Minutes   № 6
fm «22»   06   2020 y.

SPECIALTY ENTRANCE EXAMINATION PROGRAM FOR
APPLICANTS TO DOCTORAL PHD «8D04102 - ECONOMICS»

Almaty, 2020

The program is compiled in accordance with the State educational standard in the specialty "8D04102" - ECONOMICS. The program was compiled by: Doctor of Economics, Professor Mukhamediyev B.M.

The program was considered at a meeting of the Department of Economics
Minutes № 38 fm 26.05. 2020 y.
Head of Economics Deaprtment   _____ Sadykhanova G.A.

Approved at the meeting of the Methodological Bureau of HSEB
Minutes № 9 fm 27.05. 2020 y.
Chairman of the method bureau _____ Sultanova B.B..

Approved at a meeting of the HSEB Academic Council
Minutes № 11 fm   29.05. 2020 y.
Chairman of the Academic Council,
Dean of the HSEB _____ Sagiyeva R.K.

Content

1. GOALS AND OBJECTIVES OF THE SPECIALTY OF THE ENTRANCE EXAM

The entrance exam in the specialty 8D04102 - Economics for people entering PhD doctoral studies aims to determine the appropriate level of training in basic compulsory and core disciplines necessary for the further development of the educational program for training PhD doctoral students.

Applicants must:

- possess deep systemic knowledge and be able to critically assess problems, approaches and trends that reflect the current state of macroeconomics, the field of scientific research and the field of professional practice;

- understand the methods and methods that are applicable to their own scientific research and modern scientific research;

- be able to find original application of existing knowledge, along with a practical understanding of how existing methods of research and analysis are used in relevant science to create and interpret new knowledge;

- possess a systematic understanding that allows critically assessing modern scientific research and theories in this field of scientific knowledge;

- be able to evaluate methodological approaches, carry out their critical analysis and, if necessary, propose new hypotheses;

- demonstrate a systematic and creative approach to solving complex problems, be able to draw informed conclusions in the absence of complete data and clearly present their conclusions, both for specialists and for audiences that do not have the appropriate professional training;

- demonstrate independence and original approach to solving problems, independently plan and solve problems at a professional level;

- develop and deepen their knowledge and acquire new skills at a high professional level;

- have the personal qualities and skills necessary for successful employment and requiring the manifestation of initiative and personal responsibility, the ability to solve problems in complex and unpredictable situations, the ability to study independently for continuous professional development.

2. REQUIREMENTS FOR THE LEVEL OF PREPARATION FOR PERSONNEL IN PHD DOCTOR

6M050600 – Economics
6M011500 – Bases of Law and Economics
6M050700 - Management
6M050800 - Accounting and Auditing
6M050900 - Finance
6M051000 - State and local government
6M051100 - Marketing
Related specialties of foreign universities

3. PREREQUISITES OF THE EDUCATIONAL PROGRAM

Admission of persons with education in not related specialties is not provided

4. LIST OF EXAMINATION TOPICS

4.1«MICRO-MACROECONOMIC ANALYSIS»

Topic 1. Consumer Behavior. Substitution effect and income effect according to Hicks and Slutsky.

The substitution effect and the income effect for Slutsky and Hicks. Cross effects of substitution and income. Slutsky equation for direct and cross effects.

Topic 2. Winning the consumer. Compensatory and equivalent change in income.

Compensated demand. Definition, economic sense, scope. Market demand for Marshall and Hicks. The economic meaning of the differences. Equivalent and offsetting changes in income.

Topic 3. Theory of identified preferences. Market demand.

The concept of "identified preferences." A weak axiom of identified preferences. The economic meaning. Cases of its violation. Price indices and quantity indices (Paasche, Laisperes, total consumer spending) and their relationship with the theory of identified preferences. The application of the theory of identified preferences for assessing the standard of living and social programs of the government.

Topic 4. Production functions and scientific and technological progress.

Axioms of production function. The ratio of changes in the total, average and marginal product of one and two factors of production. The main types of production functions: Cobb-Douglas, Leontyev, Linear, CES. The equilibrium of the company as a problem of maximizing profits and as a problem of minimizing costs. Comparative statics of the company. Firm offer function. Cost function. The trajectory of short-term and long-term growth of the company. The optimal way to expand production. Types of technological progress: neutral, capital intensive, labor intensive. The relationship between costs and factor productivity.

Topic 5. Market interaction in conditions of imperfect competition.

Perfect competition. Conditions for maximizing profits for the company and the entire market in the short and long term. The role of economies of scale in determining the number of firms operating in an industry. Monopoly. Monopolist taxation: different options. Losses of society from monopoly. The problems of natural monopoly. Multi-product and multi-plant monopolist: choosing the optimal number of plants and products in the production of interchangeable and complementary goods. Price discrimination. Monopolistic competition. The condition for the equilibrium of a firm and industry in the long run.

Topic 6. Strategic behavior of firms in the market

Oligopoly: analytical models. Competition of quantity and price competition. Cournot model. Bertrand model with a homogeneous product. Cartel: problems of

stability in the long run. Oligopoly: game theory. Key concepts: game strategy, dominant strategy, Nash equilibrium, pure and mixed strategies. Application of game situations for analysis and solving applied problems. Pricing strategies. The threat of a new firm entering the market. Price war strategy. Games and external effects. Insurance games.

Topic 7. General economic balance and social welfare.

Conditions of existence, uniqueness and stability of competitive equilibrium. Welfare theorems. The law of Walras. General balance of consumers for the economy of exchange. The conclusion of the contract curve. Equilibrium in a monopoly. General equilibrium of producers in an economy with two factors of production and two goods. Efficiency and fairness. Application of welfare theory for income taxation. Assessment of social equality. Income curve. Lorentz curve. Gini coefficient. The role of the state in solving the problem of social equality. Social choice of society.

Topic 8. Microeconomics of foreign trade.

International division of labor. Model Ricardo. Constant, decreasing and increasing labor productivity. Heckscher-Olin model. The role of specialization with the same technology. Building a curve of commodity exchange. The impact of the introduction of import duties on public welfare in a small country and in a large country. Partial and general analysis of the consequences of the country's entry into the customs union. Pricing in the foreign exchange market.

Topic 9. Theory of intertemporal choice.

Keynesian theory of consumption. The simplest consumption function. The consequences of it. Theory of Intertemporal Choice I. Fisher. Intertemporal budget constraint. Intertemporal preferences. Optimal intertemporal selection. The effect of income and interest rates on consumption.

Topic 10. Aggregate demand: investment.

Keynesian investment model. Gross investment and net investment. Change in the physical stock of capital. Net present value of the project. The internal present value of the project. Investment function in the Keynesian model. Neoclassical investment model. Production function and marginal product of capital. investment decisions of the company. The optimal level of capital and the appropriate level of investment. Tobin's Q-theory.

Topic 11. Analysis of aggregate supply in classical theory.

Definition of aggregate supply. Marginal product of labor and real wages. Labor market. The function of a firm's demand for labor. Labor supply by households. Aggregate sentence in classical theory. Wage flexibility. Conclusion of the aggregate supply curve.

Topic 12. Aggregate sentence in Keynesian theory.

Conclusion of the aggregate supply curve with relative wage rigidity. Extreme Keynesian case. Aggregate supply from a microeconomic perspective

Topic 13. Economic cycles. Impulse propagation.

Macroeconomic fluctuations. Famous business cycles. Multiplier-accelerator interaction model. Types of cyclic vibrations. Stochastic Oscillations. Real business cycles. Flexible prices. Impulse distribution channels: through a change in physical capital and through a change in labor supply. Substitution of labor in time.

Topic 14. Macroeconomic policy in an open economy.

Equilibrium in the market of goods in an open economy. IS and LM curves and their shifts. World interest rate. Small open economy with fixed exchange rate. Perfect capital mobility. Equilibrium. The impact of fiscal policy, monetary policy. Currency devaluation. Fiscal policy and monetary policy in the context of regulation of capital flows.

Topic 15. Theories of macroeconomic policy.

Targets and tools. Tinbergen model. Monetarism and Keynesianism. The choice of instruments of economic policy in the face of uncertainty. Adaptive expectations. Labor market. Expected and unpredictable inflation and real wages. Rational expectations. Criticism of R. Lucas theory of economic policy. State budget deficit. Government budget constraint. Ways to finance the budget deficit. Budget deficit and inflation. Seigniorage. Inflation tax.

4.2. ECONOMETRICS

Theme 1. Classical regression model.

Multiple linear regression. Matrix form recording model. Least squares regression coefficient estimation. Geometric interpretation. Assumptions of the classical model. Checking the significance of regression coefficients according to t-statistics. Estimation of the quality of the regression equation. Linear restrictions on the coefficients. Chow test. Analysis of the consequences of incorrect specification of variables. Private correlation.

Theme 2. Various aspects of multiple regression.

The consequences of multicollinearity and methods for its elimination. Dummy variables. Nonlinear regression models. Logarithmic, semilogarithmic, power models. Inverse function. Choosing the shape of an econometric model. Transformation of variables. Stochastic regressors. Method of instrumental variables. Tests to detect heteroskedasticity. Methods for adjusting heteroskedasticity. Standard errors in the form of white. Weighted Least Squares

Method. Generalized Least Squares Method. Autocorrelation of a random term. Ways to eliminate autocorrelation.

Theme 3. Maximum likelihood method

Likelihood function. Estimation of coefficients and variance of a random member of a multiple linear regression model by the maximum likelihood principle Comparison with the least squares method. Consistency ratings. Binary selection models. Logit model and probit model. Estimation of model parameters.

Theme 5. Systems of simultaneous equations

Structural and reduced form of models. Model Specification Problem. Indirect least squares method. Instrumental variables. Two-step least squares method.

Theme 6. Dynamic autoregressive models

Model with distributed lags. Autoregressive model. The causes of lags. Money supply and price level. Median lag and middle lag. Lag operator Operator form of the model.

Theme 7. Stationary processes

Stationarity. Examples of stationary and non-stationary processes. White noise. Random walk. Trends Seasonality Taking consecutive differences. Checking data for stationarity. Autocorrelation function. Private autocorrelation function. Unit Root Tests. Advanced Dickey-Fuller test. Autocorrelation process. Moving Average Model. Autoregressive process of the moving average. Integrated process.

Theme 8. Multifactorial models of time series

Simultaneous analysis of several variables. Vector autoregressive model. The problem of identification. Evaluation Granger conditionality analysis. Pulse return functions. Angle-Granger Test. Cointegration. Cointegrating vector. General trends. Johansen test. Error Correction Model.

4.3. METHODOLOGY OF ECONOMIC RESEARCH

Theme 1. Place and role of methodology in the system of scientific research

The concept of methodology, the function of methodology, the place of methodology in the research system.

The study of the basic methods of economic science and their relationship with the methodology.

Methodology levels, methodology structure, subject of research, object of research, subject of research, means of scientific research, the connection of methodology with other elements of the cognition system.

Methodological levels: general methodology, philosophical methodology, methodology of science, methodology of certain areas of knowledge (natural, technical, social and humanitarian), methodological approaches and methodological guidelines.

The concept of a scientific school. Foreign and domestic schools

Study of the place and importance of economic methodology in the system of the general methodology of social and natural sciences.

Theme 2. Levels and methods of scientific research

Multilevel methodological classification. Universal philosophical methods. General scientific and private scientific methods. Disciplinary and interdisciplinary methods. Dialectics - the doctrine of the most general laws of development of nature, society and knowledge.

Principles, laws, categories. The principle of historicism. The structure of the general scientific methodology. Levels of methods and techniques of scientific research. Methods of empirical research - observation, experiment, comparison, description, measurement. Methods of theoretical research - modeling, formalization, ascent from the abstract to the concrete, etc.

General logical methods of scientific research - analysis and synthesis, induction, deduction and analogy, abstraction

Theme 3. The logic of the process of scientific research

Scientific facts and their role in scientific research. The concept of a scientific problem, its formulation and formulation. The choice, formulation and solution of scientific problems.

Scientific hypothesis, its promotion and justification. Hypothesis as a form of theoretical knowledge.

The essence of theory and its role in scientific research.

The main functions of the theory: synthetic, explanatory, philosophical, methodological, practical, predictive.

The law as a key element of the theory.

Theme 4. Steps of knowledge of economic phenomena

Formation of an economic phenomenon: its background, history and determination.

The subject of economic science and its borders.

The initial category of the system of industrial relations and its features.

Criteria for the qualitative periodization of economic development and the structure of dominant relations. The evolution and stability of economic phenomena as the basis for the formation of a system of industrial relations.

Commodity relations as the initial ratio of the exchange economy. Factors of change in dominant economic relations: socialization and technocratization of the economic base.

Theme 5. Mechanisms and models of knowledge growth

Basic concepts for the development of fundamental science. The driving forces of science: internalism, externalism.

Analysis of major research programs (paradigms). The concept of knowledge growth (K.Popper, T.Kun). The concept of a paradigm. A paradigm shift. Research Program (I. Lakatos).

The derivation and study of the key stages of economic research, as well as the consideration of the procedure of "scientific discovery" in economic science. General laws of the development of science. Evolutionary Epistemology.

Theme 6. Economics as an object of theoretical analysis

The economic system and its features. The difference between an economic system and organic and formal systems. Economic and social criteria of economic systems

The historical and social context in the process of cognition of economic phenomena.

The space of economic science: "pure" and "social" economic doctrine; The specifics of "pure" and "social" economic theory. Positive and normative economic theory

Theme 7. Features of alternative areas of economic analysis

Positivist analysis and its principles. Structuralism as an alternative course of economic analysis and its features. M. Olson "The Logic of Collective Action" and the Features of Modern Structuralism. New institutionalism and its synthetic methods R. Coase "Firm, market, law" and the modernization of institutional principles. Evolutionary doctrine and its dominants (D. North).

Theme 8. Features of the formation and development of the modern economic system

The specificity of modern methodology in the analysis of modern economic and social processes. Self-organization as a process of structural transformations of a system. The process of structural transformation of the system. Self-organization and management. Self-organization in crisis conditions. System behavior in conditions of uncertainty, risk and decision making. Stability and balance of social systems. Social norms and values as factors of their stabilization and sustainability.

Transitive (transient) processes. The transformation of society as a form of self-organization.

Theme 9. Methodology for the analysis of global processes

Globalization in the modern world: foundations, traits. Global and local - their relationship. Macroanalysis and microanalysis. Complexity and consistency in the study of global problems. Interconnection of natural and socio-cultural factors in the functioning and development of global processes. The paradox of the research methodology of modern global processes. The methodology of global evolutionism. The dynamism of the global problems of our time and the repertoire nature of the methodology for their analysis.

5. LIST OF RECOMMENDED LITERATURE

Discipline "Micro-macroeconomic analysis"

Basic:

1. Mukhamediev B.M., Dulambaeva R.T., Rakhmatullaeva D.Zh. Macroeconomics. - Almaty: Kazakh University, 2011.

2. Mukhamediev B.M. Microeconomics. - Almaty: Almaty: Kazakh University, 2011.

3. Abel E., Bernanke B. Macroeconomics. M.-SPB .: PETER, 2010.

4. Tumanova E. A., Chagas N. L. Macroeconomics. Elements of an advanced approach: textbook. Moscow State University M.V. Lomonosov. .- M .: INFRA-M, 2004.

3. Olivier Blanchard, Giovanni DelPAriccia, and Paolo Mauro. Rethinking Macroeconomic Policy. IMF, February 12, 2010.

4. Dirk Krueger. Quantitative Macroeconomics: An Introduction. - USA, 2007.

5. Krugman P.R., Obstfeld M. International Economics. Theory and Politics: Textbook for universities. M .: Faculty of Economics, Moscow State University, UNITI, 1997.

6. Jeffrey D. Sachs, Felipe B. Larren. Macroeconomics. The global approach: Per. from English - M .: Business, 1996.- 847s.

7. Pindyk R., Rubinfeld D. Microeconomics. - M .: Business, 2001.

8. Simkina L., Korneichuk B. Microeconomics. - S.-P.: Peter, 2002.

9. Kireev A. Applied macroeconomics. Textbook. - M.: International Relations, 2006.

Additional:

1. Kydland, F.E. and Prescott, E.C. 'Rules Rather than Discretion: the Inconsistency of Optimal Plans', Journal of Political Economy, June, 1997.

2. Mishkin, F.S. The Economics of Money, Banking, and Financial Markets, Forth Edition, Harper Collings College Publishers, 1995, Chapters 24, 27-28.

3. Romer, D. Advanced Macroeconomics / David Romer; David Romer.-2nd ed. - Boston Burr Ridge: McGraw-Hill Companies, Inc, 2001.- 649p.

4. Agapova, T.A. Seregina S.F. Macroeconomics. M .: Business and Service, 2004.

5. Selishchev A.S. Macroeconomics. St. Petersburg: Peter, 2005 .- 459 p.

6. Tarasevich L. S, Halperin V. M., Grebennikov P. I., Leussky A. I. Macroeconomics. - St. Petersburg: PETER, 2006.

Discipline "Econometrics"

Basic:

1. Mukhamediev B.M. Econometrics and econometric forecasting. - Almaty: Kazakh University, 2011 .-- 250 p.

2. Dougherty. Introduction to Econometrics. - Transl. From English. M.: INFRA-M, 2004.

3. Tikhomirov NP, Dorokhina E.Yu. Econometrics. - M.: Exam, 2003.

4. Econometrics. Ed. Eliseeva I.I. - M.: Finance and Statistics, 2005.

5. Workshop on econometrics. Ed. Eliseeva I.I. - M.: Finance and Statistics, 2001.

6. Kozlov A.Yu., Shishov V.F. Analysis package M8 EXCEL in economic and statistical calculations. - M.: UNITY, 2003.

Additional:

1. Siegel E. Practical business statistics. - M. - St. Petersburg. - Kiev: William, 2002.

2. Ayvazyan S.A., Mkhitaryan B.C. Applied statistics and fundamentals of econometrics. -M.: UNITY, 1998.

3. Multidimensional statistical analysis in the economy. Ed. Tamashevich V.N. - M: UNITY, 1999.

4. Eliseeva I.I., Knyazevsky B.C., Nivorozhkina L.I., Morozova Z.A. Theory of statistics with the basics of probability theory. - M.: UNITY, 2001.

Discipline "Methodology of economic research"

Basic:

1. Aubakirov Ya.A. National economy in the context of globalization. - A., "Rarity", 2010.

2. Naribaev KN, Zhatkanbaev EB, Mukhtarova KS Methods of scientific research in economics. - A., 1999.

3. Zhatkanbaev E.B. The methodology of economic research. - A., 1999.

4. Blaug M. Methodology of economic research. - M., 2004.

5. Baskakov A.Ya., Tulenkov N.V. Methodology of scientific research. Tutorial. Kiev: IAPM, 2004- 216.

Additional:

1. Polterovich V., Popov V. The evolutionary theory of economic policy // VE, No. 8, 2006.

2. Orekhov A.M. Methods of economic research: Textbook.

3. Shiyan V.N. Methodology and methodology of scientific analysis. Methodical instructions. Khabarovsk 2008

7. ENTRY REQUIREMENTS AND FORMAT

Blocks	Exam questions	Verification Form	Maximum points
Micro-macroeconomic analysis	1 question	writing	100
Econometrics	1 question	writing	100
METHODOLOGY OF ECONOMIC RESEARCH	1 question	writing	100
Practical task	1 question	writing	100
TOTAL			(100+100+100+100)/4

The examination is conducted in writing using a 100-point grading system. The exam lasts 3 astronomical hours.

Applicants to the doctoral program in Economics should have knowledge of macroeconomics, econometrics, and enterprise economics in the scope of a master's program.

The examination ticket contains 4 tasks (1 question on micro-macroeconomic analysis and 1 question on econometrics, 1 question on the methodology of economic research, 1 task on micro-macroeconomic analysis or econometrics).

Assessment of answers to exam questions is carried out on a 100-point scale, taking into account the degree of completeness of the answer. Based on the results of all four answers, an average score is displayed. The maximum final score is 100%.

An exam is considered to be "unsatisfactory" if the applicant scored less than 50 points on one of the questions.

The answers should use the notation generally accepted in economic theory.

Applications for appeal are accepted after the announcement of the exam results.

8. SCALE FOR EVALUATION OF EXAM RESULTS FOR EACH DISCIPLINE

Letter Grade	Rating points (%)	Traditional system rating
A	95-100	Excellent
A-	90-94	
B+	85-89	Good
B	80-84	
B-	75-79	
C+	70-74	Satisfactorily
C	65-69	
C-	60-64	
D+	55-59	
D-	50-54	
F	0-49	Unsatisfactory

Assessment "Excellent" (90-100%): given correct and complete answers to all questions; the material is set forth correctly in a logical sequence; demonstrated creativity.

Evaluation "Good" (75-89%): correct but incomplete answers to questions are given, insignificant errors or inaccuracies are allowed; the material is set out correctly in a logical sequence.

Assessment "Satisfactory" (50-74%): answers to questions are in principle correct, but incomplete, inaccuracies in the wording and logical errors were made; the material is presented correctly, but the logical sequence is broken.

Assessment "Unsatisfactory" (0-49%): answers to questions contain gross errors; in the statement of the answer, grammatical and terminological errors were made, the logical sequence was violated.