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National Aviation University
Educational and Research Institute of Economics and Management
Faculty of Management and Logistics
Management of Foreign Economic Activity of Enterprises Department

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Quality Management System

SYLLABUS

on

"Methodology and Organization of Scientific Researches"

Major: 6.030601 "Management"
Specialty: 8.03060104 "Management of Foreign Economic Activity"

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Self-study - 28
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The Syllabus on "Methodology and Organization of Scientific Researches" is based on the educational and professional program and Master Curriculum № HM-6-8.03060104-a/15 for Major 6.030601 «Management» by the specialty 8.03060104 «Management of Foreign Economic Activity» and correspondent normative documents.

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CONTENTS

	page
Introduction	4
1. Explanatory notes	4
1.1 Subject status in the system of professional training.....	4
1.2. Target of the subject.....	4
1.3. Objectives to study the subject.....	4
1.4. Integrated requirements for knowledge and skills of the subject (educational modules).....	4
1.5. Interdisciplinary links of the subject.....	5
2. Subject content	5
2.1. Module №1 "Methodology and Organization of Scientific Researches".....	5
3. List of references	7



1. EXPLANATORY NOTE

1.1. Subject status in the system of professional training

Syllabus on the discipline «Methodology and Organization of Scientific Researches» reflects the essence of the methodology, concepts, methods and techniques in scientific work in economics and management of the enterprise (organization), field.

The course is the theoretical foundation for body of knowledge and skills needed to conduct applied researches in the sphere of enterprise economics and management.

1.2. Target of the subject

The goal of teaching the discipline is to introduce with the methodology of scientific researches, develop abilities for applying in practice, organize research activities on the enterprise or organization.

1.3. Objectives to study the subject

- mastering methodology, methods, concepts and logic of organization of scientific researches conduction;
- use of management and economic disciplines knowledge to create favorable conditions for research activities on the enterprise (organization) to promote innovative development of the country;
- mastering methodological provisions for planning, organization, control, coordination and motivation of scientific work by students;
- use of complex knowledge in management of organizations to create favorable conditions for creative scientific activity of the personnel.

1.4. Integrated requirements for knowledge and skills of the subject (educational module)

Training material of the subject is structured by modular principle and consists of a single educational module, which is logically complete, relatively independent, integral part of the curriculum, mastering of which involves a modular test and analysis of its performance.

1.4.1. As a result of learning training **module №1 «Methodology and Organization of Scientific Researches»** student must:

Know:

- basic concepts, bases and principles of scientific research activity;
- types of scientific researches and peculiarities of their conduction;
- methodology, methods and techniques of scientific research;
- essence of theoretical and modern empirical methods of scientific researches;
- possibilities and limits of the application of mathematical and statistical modeling of economic and management processes;
- methodological and organizational features of economic research conduction;
- ways of coordinating complex scientific researches;
- methods of assessment of research results effectiveness;
- standards for scientific documentation design;
- stages, forms of approbation and protection of scientific research results.

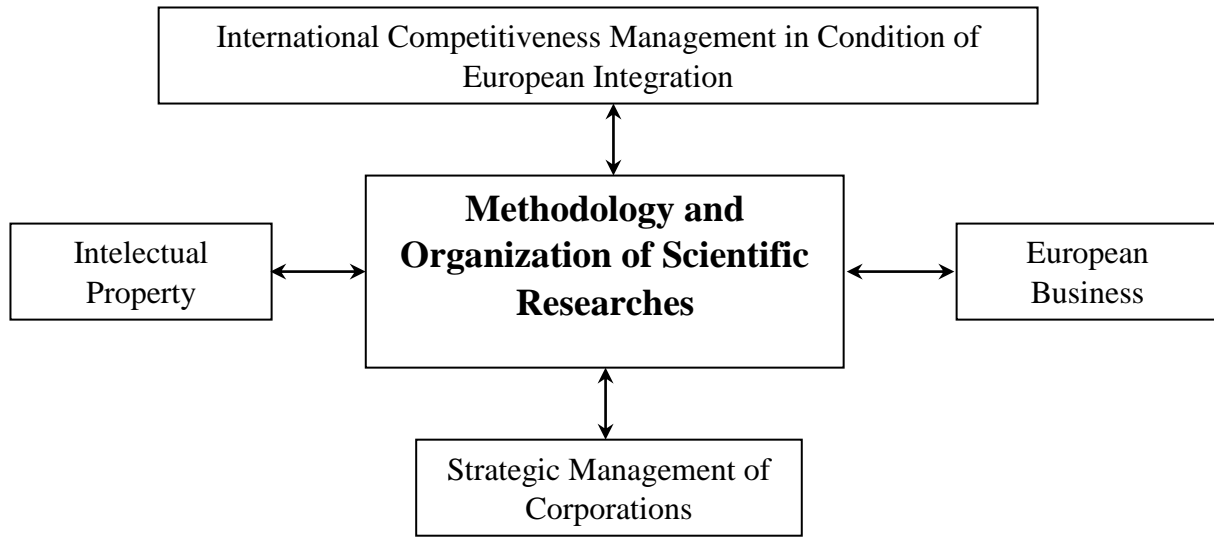
Learning outcomes:

- detect and update economic and management problems, justify ways of solving them;
- formulate the subject and object of a study;
- put innovative problem, justify solving methods;
- formulate working hypotheses and check them;
- organize collection of information necessary for research and patent search;
- use the latest scientific results during scientific research conduction;



- carry out experimental calculations and justify the research results;
- reflect scientific results in articles, theses, reports, diploma work, monographs, etc.
- examine the results of research;
- determine areas of the effective introduction of scientific research results;
- assess the effectiveness of implementation of the results of scientific work.

1.5. Interdisciplinary links of the subject



2. SUBJECT CONTENT

2.1. Module №1 "Methodology and organization of scientific researches".

Topic 2.1.1. A science as system of knowledge and scientific activity.

Subject place in system of preparation of the expert. Concept of a science. System of scientific knowledge. Forms of scientific activity. Scientific result and a scientific product. Public planetary value of a science. The purpose and science functions. Evolution of scientific knowledge. Processes of science mutual convergence. System of scientific knowledge. The purpose, object, a subject of scientific research. Informative tasks in scientific research: theoretical, empirical, logic. Absoluteness i a relativity of scientific knowledge.

Topic 2.1.2. Methodological bases of scientific knowledge.

Object of research. Three levels of scientific methodology. Methodology, scientific idea, hypothesis, method, receptions in scientific researches. Features of their carrying out and value in innovative development of a society. Conceptual bases of scientific researches. Classification of scientific research methods: general scientific methods, methods of theoretical research, scientific methods of empirical research. Typology of the scientific information sources. Accumulation and integration of scientific knowledge. Diffusion of scientific knowledge and specialisation of scientific activity. Formation of scientific schools.

Topic 2.1.3. Theoretical study methods.



Typology of theoretical study methods (analysis, synthesis, induction, deduction, modeling, designing, forecasting, ordering, qualification, conceptual experiment). Ideal (abstract) objects in theoretical researches. Main point of mental experiment in theoretical studies. Theoretical laws as a methodological basis of ideal communications modeling between ideal objects. Two levels of theoretical knowledge: partial models and laws; the generalized basis concepts – the general laws. Formalization as especial reception of theoretical thinking. An axiomatic method. Kinds of hypotheses. The general theoretical principles. Global and partial theories. Theoretical result and experiment. Using features of analytical and statistical scientific data processing methods.

Topic 2.1.4. Empirical laws of scientific research.

Practice and experiment as criterion of the theoretical results truth. Main point of scientific research empirical methods. Place and value of experiment in applied researches. Actualisation of problems and tasks. Estimation of their objective character. The analysis of their decision ways and methods. Substantiation of research subject and object. A formulation of working hypotheses, selection of modelling methods and analysis, objects, tools. Working out of research technique. Definition of the necessary scientific information. A substantiation of methods and ways of its gathering, processing, generalisation, a reliability estimation. Methods of statistics formation. Test of hypothesis.

Topic 2.1.5. Scientific research information supply.

Classification and functions of the scientific information. Scientific information mediums. Professional-information communications. Functions of scientific research and work information supply. Sources of the scientific and technical information, access modes to it. Laws of Ukraine under the scientific and technical information. Information resources. Information funds. Structure of the national scientific and technical information system. Its functions. Information space and information market. Reliability of the information. The primary and secondary information. Information and patent search. Information protection. Kinds of scientifically-methodical literature issues.

Topic 2.1.6. The organization of economical researches.

Bases of economic sciences system. Problems of modern economic scientific thought. Planetary, continental, national, regional, branch economic problems. Actualization of modern management problems. A scientific prediction and forecasting in the field of management. Structurally-logic schemes of economic researches on hierarchical level, scale. Sources of the economic information. Ageing of the economic information. Problems of economic processes modelling and introduction of scientific results in practice. Areas of display of scientific research results efficiency, estimation of their efficiency and possible consequences of introduction. The organisation of complex scientific works. Methods and tools of their performance coordination. Organizational-economic forms and mechanisms of scientific research regulation.

Topic 2.1.7. Scientific and pedagogical personals.

Requirements to scientific and pedagogical personals. Classification of scientific and pedagogical personnels of research institutes, universities, project institutes. Scientists and scientific associates. Scientific degrees, academic statuses, scientific posts. Scientific degrees:



the master, the candidate of science (the philosophy doctor), the doctor of science. Academic statuses: the senior scientific associate, associate professor, professor. The higher academic ranks: the Member-correspondent, the Academician. The code of the scientist honor. Forms of scientific and pedagogical personals preparation. Classification of scientific institutions of Ukraine and the leading countries.

Topic 2.1.8. Forms of scientific results mapping.

Processing of research consequences. Trim of scientific work results typography. A language of science. The basic requirements of international and state standards to the scientific and technical documentation. Forms of scientific research results mapping (scientific report, message, report, report theses, paper, master/bachelor thesis, monograph, thesis). Their structure. Concept and forms of research results review. Problems and tasks of author's support at introduction of research results.

3. List of references

3.1. Basic literature

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3.2. Additional literature

- 3.2.1. Дитхелм Г. Управление проектами: Пер. с нем.: В 2 т. / [Науч. ред. А.М.Немчин, С.Н.Никешин] — СПб.: Изд. дом «Бизнес-пресса»: Корпорация Двадцатый трест, 2004. – 860 с.
- 3.2.2. Доброзорова О.В., Осадчук І.В. Організація праці менеджера: навчальний посібник / МОН. – Київ: Кондор, 2009. – 502с.
- 3.2.3. Опп А. Д. Управление проектами: Рук. по ключевым процессам, моделям и методам. / Пер. с англ. О. В.Теплых; Под науч. ред. Т. В.Герасимовой. — Д.: Баланс Бизнес Букс, 2006. — 216 с.
- 3.2.4. Сурмін Ю.Г. Майстерня вченого: Підручник. – К. : Знання-Прес, 2006. – 280с.
- 3.2.5. Шейко В.М., Кушнарєнко Н.М. Методика науково-дослідницької діяльності: Підручник. – К.: Знання-Прес, 2002. – 295с.



АРКУШ РЕЄСТРАЦІЇ РЕВІЗІЇ

№ пор.	Прізвище ім'я по-батькові	Дата ревізії	Підпис	Висновок щодо адекватності

(Ф 03.02 – 03)

АРКУШ ОБЛІКУ ЗМІН

№ зміни	№ листа (сторінки)				Підпис особи, яка внесла зміну	Дата внесення зміни	Дата введення зміни
	Зміненого	Заміненого	Нового	Анульованого			

(Ф 03.02 – 32)

УЗГОДЖЕННЯ ЗМІН

	Підпис	Ініціали, прізвище	Посада	Дата
Розробник				
Узгоджено				
Узгоджено				
Узгоджено				