

# Philosophy and General Philosophy of Medicine: study guide

### КУПИТИ



The study guide «Philosophy and General Philosophy of Medicine» contains the texts regarding the main subfields of philosophy included to the program of the University course on this academic discipline. The guidelines for seminars, the questions for self-control and a guide to philosophical terms are also presented. The study guide is committed to provide information on the issues of the history of philosophy, ontology, philosophical anthropology, gnoseology, methodology, social philosophy and philosophy of medicine. The study guide is designed to meet the academic, professional needs of medical students of the higher education establishments.



I.V. VASYLIEVA, A.Yu. VERMENKO

# Philosophy and General Philosophy of Medicine

#### STUDY GUIDE

#### RECOMMENDED

by the Academic Council of Bogomolets National Medical University as a study guide for students of English language education

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#### INTRODUCTION

The textbook "Philosophy and General Philosophy of Medicine" provides the information concerning the main subfields of philosophy included to the program of the University course of this academic discipline. The issues on the history of philosophy, ontology, philosophical anthropology, gnoseology, methodology, social philosophy and philosophy of medicine are presented and discussed in the textbook.

The course is based on the knowledge gained from the "History of Ukraine", "History of Ukrainian and Foreign Cultures", "Religious Studies", "Logics", "History of Medicine" and "Bioethics". Knowledge and skills acquired while studying these courses can be applied in the process of Philosophy mastering.

The objective of the course is to shape the students' knowledge of all the main philosophical concepts, to form the plurality and alternative ways of philosophical perception and thinking and to provide the theoretical, axiological, methodological basis for the systematic scientific world outlook as an important element of the medical professional world outlook.

The course focuses on the main notions and aims of Philosophy, the philosophical aspects of methodology, ontology and gnoseology, as well as the current problems of society development. Special attention is paid to the history of philosophy. The separate chapter is devoted to philosophy of medicine, since from ancient Greece to the modern era philosophy has been at the basis of medicine. Philosophy provides the theoretical, analytical, methodological tools for the analysis of concepts in medicine, such as disease, health and care. The art of medicine involves practical reasoning, that is, critical thinking, intuition and sound judgment, which are in the field of philosophical issues. Moreover, the medical practice raises the questions which are central to philosophy. The general concepts and principles of philosophy of medicine are highlighted in the textbook.

Students are supposed to get explicit information about the general content of the course: the main notions and definitions of the fundamental philosophical categories, the facts from the history of philosophy and those regarding the contemporary problems of the modern society development. At the end of the course students will be able to use the acquired philosophical knowledge for the real social life problems analysis and formation of per-

#### INTRODUCTION

sonal position about the most topical problems of the modern society development.

The book contains 12 chapters: Human World Outlook and General Problems of Philosophy, Ancient World Philosophy, Medieval and Renaissance Philosophy, European Philosophy of the XVII—XIX centuries, Modern Philosophy, Philosophy of Ukraine, Ontology, Philosophical Anthropology and Problems of Human Conscience, Gnoseology, Philosophical Aspects of Methodology, Social Philosophy and Philosophy of Medicine. The list of recommended literature, the guidelines for seminars and questions for students' self-control are also included. A guide to philosophical terms will help readers in mastering the main notions and concepts of Philosophy.

The authors convey sincere gratitude to the reviewers for their valuable remarks and useful suggestions.

The authors wish readers every success in mastering Philosophy.

#### PHILOSOPHY OF MEDICINE

Philosophy of medicine and medicine as a science. Philosophy of medicine is one of the most important practical subfields of philosophy, especially for the medical students. It can be determined as a branch of philosophy that studies the problems of ontology (or metaphysics), gnoseology (epistemology), methodology, social philosophy, ethics, bioethics and philosophy of healthcare associated with the medical theory and practice. The general philosophical approaches are to be significantly transformed in this regard to properly reflect and describe the specific features of medicine theoretical and methodological basis, ethics, practical activity and its interaction with the other spheres of society structure. The main aim of philosophy of medicine is to uncover philosophical aspects of medicine both as theoretical science and practical activity and to help in formation of the systematic world outlook of students, teachers and practical specialists of medical subsystem of society. The main problems which should be discussed are the problems of human health and disease, norm and pathology, juridical, cultural and ethical rules of medical personnel activity, role of patients and doctors in preventing and curing diseases and providing the optimal conditions of health keeping and human physical abilities developing in their generality, systematical links to other components of the human essence and correlation with both eternal general human values and individual conditions and demands of the specific professions, social groups, historical periods and types of the natural environment.

The first problem, which the philosophy of medicine should research, is the problem of specific application of the scientific knowledge norms and results of development to biological organisms as the most changeable elements of nature and human organism as the specific unity of the biological and social characteristics.

The philosophy of medicine is often understood as a part of philosophy of science. But there are many reasons to deny such the approach. First of all, the standards of the strictly scientific approach are formed in medicine only from the XIX century, so they could not be applied to all the periods of its historical development. But the attempts of the general theoretical understanding of the medical problems were undertaken from the earliest periods

of the Ancient philosophy formation and the ideas formed at that time cannot be ignored in the process of philosophical evaluation of medicine problems. The works of Hippocrates can be a good example of this.

The second problem is the complicated and complex nature of the medical practical activity as a sociocultural phenomenon which has been much diversified in the different regions and historical periods and remains so even in the modern society. The core of it, undoubtedly, consists of the professionals activity with the formal medical education and diplomas verifying it, but is also supplemented by the daily activities of the common citizens providing the elementary medical services for themselves and their families, including the very basic forms of hygienic and health care activity of the members of territorial communities, agricultural and craftsmen collectives in the undeveloped regions of the world. In addition, currently, we could observe the significant increase in the aggressive advertising and widespread use of the alternative medicines, procedures and approaches, which can lead to the need of philosophical evaluation of the new medical (or even anti medical) mythology and all types of misunderstanding, superstition or speculation. This is caused by many reasons the main of which are the personal negative experience with official medicine interaction, the general overflow of information due to the results of the most modern information exchange technologies which caused the overload of the human perception and judgment ability provided by common sense, quickly expired professional and general knowledge database due to the constant acceleration of the technological progress and, consequently, the development of mistrust towards the scientific world view. In this regard, we shall remind that the philosophical approach can provide the great benefit in terms of the longer periods of forecasting between the real exposition of the problems to the strictly scientific research as well as make it possible to use the more systematical approach for description and explanation of the problem with incorporation of some non scientific elements (cultural, ethical, ethnical and so on). The existence and historical development of alternative medicine common among the population is a complicated and complex social phenomenon which should be treated with the equally complex system of approaches, including not only scientific but also historical, economic, social, cultural and, certainly, philosophical.

It is worthy to underline the etymological correlation between the words "philosophy" and "medicine". If "philosophy" in the Ancient Greek language meant "love for wisdom", "medicine" in Sanskrit meant "great wis-

dom". This great wisdom included the elements of the knowledge about the Universe, its structure and laws as well as the knowledge about human nature, essence and role in the world, the human ability to prevent and heal diseases by the proper training and treatment of the organism and keeping right type of connections with all the elements of the world structure (though often expressed in specific anthropomorphic or even animistic style). In Latin language "medicus" meant healing, helpful, proper treating.

The philosophical and medical tractates of the Ancient East described the restoration of the proper type of connection between the person and nature as the main way of any medical treatment. For example, Wu wei principle in Taoist teaching continues the ideas of following the natural order of things, explains that beings (or phenomena) that are wholly in harmony with the Tao behave in a completely natural, uncontroversial way.

The philosophy and medicine of the Ancient West were also closely related to each other. Socrates proposed all the humans to focus on acquiring knowledge about themselves, identifying their relations with the common ideas and principles of the world and humanity organization as well as their unique features, mechanisms of self-management, self-development and self-correction. But during the later stages of the Western theoretical knowledge historical development such holistic approach was gradually replaced by more and more specialized understanding of the entire world and the human organism in particular, which eventually led to the fragmentary and narrow scope of all the sciences including medicine. The wisdom of the medical activity is based on the proper understanding of laws, structure and possible changes of the world in general and human life.

The nature of doctors' activity is mostly determined by the world outlook content and general orientation. During the period of its origin the basic content of ideas about the rules of the medical activity depended on the understanding of the real world. The views of the ancient materialists about the basic elements of the world led to the appearance of one type of ideas about the character of diseases, in which the main reasons of diseases were the absence of improper concentration of some natural elements in the human body. On the other hand, the animistic interpretation of the world gave birth to the other type of ideas, in which the appearance of the disease was associated with the penetration of the evil spirits into the human bodies. Along with the use of the medicines (plants, minerals, etc.) the main focus was made on the exorcism of the evil spirits from the human being with the different magical rituals, spells and so on. This was the first pre-scientific pe-

riod, when mostly priests and sages were the doctors, a period of syncretism domination in knowledge, when the philosophical, medical and other forms of pre-scientific knowledge were not diversified.

This period in medicine lasted until the times of Hippocrates (IV—V BC), which laid many basic principles of medicine and separated medicine from philosophy. Only from this period one can observe the interaction between medicine and philosophy as the separate branches of the scientific knowledge. This distinction is reflected in one of the names of Hippocrates—"the doctor and philosopher who was a god like". This can be used for the substantiation of the philosophical training of a doctor. According to Hippocrates, there is a two-way interaction between philosophy and medicine. Philosophy should be introduced into medicine and vice versa, since all the properties of philosophy are found in medicine. Medicine cannot exist without general ideas of philosophy and philosophy cannot exist without the facts which are provided by medicine. This is of the primary importance, since medicine is one of the most dynamic areas of the human knowledge.

The views of the representatives of Milesian philosophy school (IV— VBC) had a significant influence on the formation of Hippocrates ideas, in particular, his teaching on the role of the fluid substances (humor) in a human body which determine the type of temperament. Thales considered water to be the basic element of the world, but Hippocrates stated that fluid was the basic element of living being. The main fluids of the human body were differentiated into the next set of 4 forms: blood, phlegm, yellow bile and black bile. The quantity and quality proportion of these fluids determines the type of health and diseases of a human. The normal composition of liquids and proper proportional correlation between them is the basics of health. The incorrect mixture of fluids and misbalance between them are the causes of diseases. The Hippocrates' doctrine consists not only in the development of the humoral theory in medicine, although, it also played an important role in the development of the scientific foundations of medicine. The Milesian philosophical school preceded the atomistic theory of Leucippus and Democritus; the humoral theory in medicine preceded the solidarity teaching of Asclepius. According to Asclepius the human body consists of infinite quantity of atoms and canals (poros), which are sensitive and situated between them. The main cause of diseases is the change of such canal parameters which induce their narrowing or expanding. According to such views on the nature of disease, during its treatment the doctors tried to provide the necessary narrowing or expanding of the canals. Atomism was only one of

the theoretical pre-conditions of the solidarism formation in medicine. Another no less important reason was the development of the anatomic knowledge. It is worth considering the specifics of the cognitive activity of a person who passes from external or superficial knowledge to the inner, hidden knowledge. The changes in the organism associated with the fluid discharge are more observable than the sickly changes in the body tissues. During the next 15 centuries the theoretical systems originating from the teaching of C. Galen (131—200 AD) dominated in medicine. His doctrine was based on the philosophical principles of Plato and Aristotle. In particular, he applied the principles of Aristotle logic in classifying diseases, i. e. He distinguishes: 1) diseases of homogeneous organs and tissues; 2) diseases of heterogeneous organs and tissues; 3) diseases of basic liquids. Each group of diseases was subdivided into three subgroups in accordance with the logic principles: 1) the principle of localization was proposed to differentiate the diseases by the place of injured organs and tissues; 2) the symptoms principle was proposed to differentiate the diseases by the most typical symptoms; 3) the etiological principle was proposed to differentiate the diseases by the causes and conditions of their onset.

The idealistic elements of Aristotle's and Plato's teachings and the Christian theology significantly influence the formation of medical ideas of C. Galen. He subordinated humoral and solidarity essences to spiritual and divine. According to C. Galen life is the highest manifestation of divine power. The basis for morphology and functioning of organs is the relevance which is understood teleologically. He substantiated the doctrine on a different number of bones in the body of men and women with the reference to the Biblical teaching of Eve creation from the rib of Adam. C. Galen was considered to be an example for a medieval doctor.

Empiricism and mathematical generalizations connected with F. Bacon and R. Descartes played an important role in the development of the medical scientific cognition. They became a characteristic feature of the New Time period and had a substantial influence on the development of the medical theory and practice. F. Bacon (1561—1626) was a real founder of the experimental science. According to him, one should not trust accidental perception, but it is necessary to carry out the systematic observations and add them taking into account experience. The best evidence is experience based on the experiment. Applying the inductive method created by him to the specifics of the medical knowledge, F. Bacon emphasized the special role of the disease history and knowledge of conditions of its appearance. He rec-

ommended the etiological therapy and curative diet. F. Bacon thought the restoration of health and reduction of suffering to be equally important, recommended to make death maximally easy, painless and calm. He was also the first to divide medicine into three main divisions: health support (valeology), treatment of diseases (practical medicine), life extension (gerontology).

**R. Descartes** (1596—1650) based his methodology on the principles of the rational deduction. He wrote that scientific discoveries were the results of thinking, but not the experiments. The scientific knowledge for him is not the inclusion of the individual discoveries into the general world picture, but the creation of the general terminological ethics aimed to reveal the general truth. R. Descartes was one of the founders of the teaching about reflexes, based on the ideas of determinism, the interaction of organism and environment, the idea about the organism as a machine. This led to the investigation of this machine and accumulation of knowledge about the human morphology, as well as the functional designation of its parts, which led to the birth of physiology.

It is clear that the principles of mechanics could not fully explain the different aspects of the whole organism functioning. There was the opposition between the iatrophysical and iatrochemical schools in medicine of that time. Iatrophysists considered mechanic movement to be the basis of the human life and human organism functioning. The prominent iatrophysicist Giovanni Borelli (1608-1679) modeled the human body, various animals and their motions using the mechanical principles. Another notable iatrophysicist the French philosopher and mathematician Rene Descartes (1596—1650), who, as a consequence of his philosophy claimed that the human body and soul were two dual entities, treated the human body as a machine that could be quantified, disassembled, and studied. He attempted to simulate the various phenomena such as the brain, movement, sleep, circulation, and senses similar to inanimate objects such as reservoirs, pipes, lenses and steam engines, which often sought to maintain the equilibrium for certain states. Some of his claims were often independent of the physical observation of the organ or body in question, and emphasized what he deemed as "simple" or "rational" rather than reality. For example, he asserts that the blood circulates throughout the body, expanding like steam by the heart's heat rather than from contraction.

The bitter opponents of iatrophysists, the iatrochemical school represented by Helmond, Sylvius and Paracelsus supported the idea about the chemi-

cal nature of physiological processes in the organism. Paracelsus described a human body as a complex chemical system and founded the tradition of the experimental researches in medicine. German-born physician Franciscus Sylvius (1614—1672), is the best known in the XVIII century European medicine for his contributions to the understanding of the biochemistry of the body and the tubercles, and as one of the co-founders of the iatrochemical school. As the adherent of the humoral medicine, Sylvius believed that diseases resulted from the humor excesses in the body, but he saw it as a more chemically conditioned excess, in particular, too much acid or alkali solution in the body. Sylvius had his own laboratory in which he experimented with acids and alkaline solutions to see the result of mixing different substances. Most of his theories about the human body were based on the digestion processes. His understanding was in the idea that digestion helped food to undergo a fermentation reaction. He rationalized that the body functioned mainly as a result of the chemical reactions, in which acids and alkali were the essential reactants and products which needed to be kept in balance to provide a healthy state. Although Sylvius did not accept the more observation-based style of medicine that was maintained in the XVII— XVIII centuries, his emphasis on the chemical reactions and knowledge helped to support this more scientific approach to medicine, focused on observation. It is known that many of Sylvius' investigations helped in the future discoveries of the certain enzymes which stimulate digestion and bodily reactions. Iatrochemistry became a new practice in the XVII century, a period when the traditional medicines were based on the legacy of the IV— V centuries BC. Much of this tradition was derived from Galen and Avicenna. The iatrochemists rejected the traditional medical theory, mostly from Galenic traditionalists. Galen traditionalists sought to establish the balance of temperament within the bodies. There are two pairs of qualities, hot and cold, wet and dry. A disease is caused by the imbalance of one quality. That is, the cold was an excess of heat (hot quality), so it can be cured by reducing the hot quality or by increasing the cold one. The introchemists, influenced by Paracelsus' ideas, believed that disease was caused by the outside source, and not because of the imbalance in the body. Another controversy between Galenic traditionalists and iatrochemists was the way of using herbs. The Galenic traditionalists thought that the strength of remedies relied on the amount of the plant materials that was used. The introchemists, however, supported the chemical preparation of materials for remedies to improve their effectiveness or to find the stronger medicine. Additionally,

Galenic traditionalists argued that chemically prepared medicines were poisonous, and the iatrochemists were inadequately trained. The former was true, and, in some cases, both were correct. Since Paracelsus claimed that poisons could have the beneficial medical effects, the number of toxic ingredients used in chemical medicines had increased. Later, Galenic traditionalists adapted the medical method and some remedies to use in their own fields.

The iatrochemical principles form a major part of the Indian alchemical tradition (Sanskrit rasaúâstra). Alchemical texts start to be composed in Sanskrit in South Asia from the end of the first millennium CE, and a flourishing of literature developed and continued even in the twentieth century. These works contain the extensive chapters on the use of alchemical recipes for healing. The use of plants, minerals and metals in medical therapeutics was also practiced in India. In Ayurvedic medicine, the substances used in these therapeutic agents were known as "Rasa dravyas". Ayurvedic medicine instills the belief that every material had the potential to be used as a substance. This induces the creation of the new products and new application for the common substances in nature. The people of Ayurvedic medicine categorize the materials in nature into three categories: "Janagama", substances from animals such as milk, urine, blood, and meat, "Audbhida" or substances from plants such as stems, roots or leaves, and "Paarthiwa" or metal/mineral substances such as gold, silver, copper or sulfur. In this culture, the special attention was paid to the element mercury. These specific practices in Ayurvedic medicine were called "Rasashaastra", which means the "Science of Mercury" which has eventually become known as Iatrochemistry in the current terminology. "Rasashaastra" was focused on the processing of these metals to make them digestible in the human body. The therapeutic effect of the materials, such as metals and minerals, that were known to be indigestible by the human body were combined with plants or animal materials to increase their delivery ability to the human body.

The vitalist concepts explained processes of life by supernatural forces such as vital source and energy. The well-known representative of vitalism was *George von Stoll* (1659—1739) who developed the theory of phlogiston. He understood the life activity of the organisms from the point of view of absolute necessity. The disease was interpreted as a sum of intentional movements of the soul aimed to remove some harmful agents from the body. The founder of homeopathy *Samuel Hahnemann* (1755—1834) named the metaphysics styles of philosophy to be important factor of the medicine

development. One of the main of them was mono casual concept which explained the development of disease by the influence of only one factor.

The period of medicine inclusion in the natural philosophy was finished and adoption of the classical theoretical and scientific approach in medicine has happened during the XVII—XIX centuries. At the beginning of the XX century medicine has already had many important scientific achievements, such as the epistemological organization of knowledge in pathological anatomy, physiology, pathological physiology, bacteriology and so on. The first in the history of medicine successful attempt of the theoretical synthesis of the medical knowledge in the exactly scientific way was the cellular pathology theory created by *R. Virhov*. It was practically the single medical theoretical system which performed the function of integrative theory for a long period of time.

The interaction between philosophy and medicine acquired the specific character. Philosophy performed the compensatory function as the scientific theory of medicine or some theoretical addition to the medical knowledge in the frame work of the natural philosophy approach. This compensated to some extend the heterochronic character of medical culture formation caused by the slower development of its theoretical and gnoseological system in comparison with its practical and object-orientated elements, including ethics. One of the main reasons for such heterochronic development of the medical culture and its slow progress if compared to biological science is the specificity of its object of research, and this cannot be completely compensated.

The object of research of medicine and its place in the system of modern knowledge. Generally, the object is something to which gnoseological or practical activity will be applied. The object is composed of such properties which are studied by some branches of science in accordance with its specific point of view, using its own terminology and system of categories, its own specific system of scientific laws, which are distinct from each other in the different branches of science.

The main object of research in medicine has been and remains during all the historical periods the human in all fullness of his definitions from the physical body to the social, psychical and spiritual qualities of personality. Medicine studies all the aspects of the human life activity which are related to the problem of human health and disease, norm and pathology in all their diversity and specific relations of human and his natural, social and cultural environment. The specific laws of medicine are the objective laws of the

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