

MINISTRY OF HEALTH PROTECTION OF UKRAINE
ODESSA NATIONAL MEDICAL UNIVERSITY
 Department of general and clinical epidemiology and biosafety

Syllabus of the academic discipline
 "Design of scientific research"

Scope of the academic discipline	Total hours per discipline: 90 hours, 3.0 credits. Semester: IX - X semester, 5th year of study
Days, time, place of educational discipline	According to the schedule of classes. Department of general and clinical epidemiology and biosafety, str. Primorsky Boulevard, 13
Teacher(s)	Golubyatnikov M.I, doctor of medicine, professor, head of the department. Professors: Doctor of Medicine Bachynska O.V., Doctor of Medicine. A. I. Savchuk, Doctor of Medicine. K.O. Talalaev, Doctor of Medicine. Haidey V.R. Associate professors: Servetskyi S.K., Fedorenko T.V. Assistants: T.V. Gerasimenko, G.M. Jurtubaeva, O.A. Melnyk, K.S. Hrytsenko, L.V. Kostolonova, M.O. Makarenko.
Contact Information	Help by phone: Melnyk O.A., phone - 0965920621, responsible for organizational and educational work of the department phone Gavrushko T.G., laboratory assistant of the department; phone number - 0681241260 olena.kozishkurt@onmedu.edu.ua Face-to-face consultations: from 2:00 p.m. to 5:00 p.m. every Thursday, from 9:00 a.m. to 2:00 p.m. every Saturday Online consultations: from 4:00 p.m. to 6:00 p.m. every Thursday, from 9:00 a.m. to 2:00 p.m. every Saturday. The link to the online consultation is provided to each group during classes separately.

COMMUNICATION

Classes are held at the department, according to the schedule. Communication with applicants will be conducted in the classroom (face-to-face). During distance learning, communication is carried out through the Microsoft Teams platform, as well as through e-mail correspondence, Viber messengers (through groups created in Viber for each group, separately through the head of the group).

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ABSTRACT OF THE EDUCATIONAL DISCIPLINE

The subject of study of the academic discipline: preparation for independent research work, which makes it possible to combine general worldview knowledge with competences in the field of a specific fundamental or applied discipline in research practice, to understand the subject and specifics of science as a way of objective knowledge of the world in general and a specific field in particular, to understand the necessary stages of scientific research work: from formulating the problem and searching for the necessary information to the organization and registration of the results of the conducted research.

The purpose of the educational discipline is: the formation in future specialists of a holistic view of science as a system of knowledge and a tool of cognition, scientifically based views on the methodology of scientific cognition, the essence of general scientific and special methods and principles of conducting research and processing the obtained results, their use in practical activities.

Tasks of the discipline:

- creation of holistic knowledge about scientific specificity, conducting scientific work;
- familiarization with the subject and essence of science and her main functions, classification of sciences, scientific and technical potential of Ukraine;
- mastering the principles of scientific research organization;
- familiarization with the information base of scientific research;
- study and skill to apply general and applied methods of scientific research;
- assimilation of issues of the formation of a scientist as a person and the regime of his work;
- mastery of ways of representation of scientific research results.

Expected learning outcomes.

As a result of studying the academic discipline, the applicant should: Know

- the subject and essence of science and its main functions;
- basic provisions of scientific design;
- organizational and legal bases of scientific activities, principles of organization and functioning of the scientific community;
- peculiarities of scientific work and principles of organization of scientific research;
- information base of scientific research;
- general and special methods of scientific research;
- stages of the formation of a scientist as a person and the mode of his work.

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Be able:

- organize your scientific activity;
- use modern information bases and algorithms for their application when planning and conducting scientific research;
- use general and special methods of scientific research;
- to issue the results scientific and research work (dissertation, article, thesis, report).

DESCRIPTION OF THE EDUCATIONAL DISCIPLINE

Forms and methods of education

The discipline will be taught in the form of practical classes (30 hours).
Organization of independent work of applicants (60 hours).

Teaching methods: conversation, role-playing, solving clinical situational problems, practicing skills

Content of the academic discipline

Topic 1. The role of science in the development of society. Scientific product and its types.

Topic 2. Organization of a scientist's work. Organization of work in scientific activity. The effectiveness of the scientist's work. The main features of a scientist.

Topic 3. Research work of applicants. Tasks of the group of the Scientific and Research Unit on work with the acquirers. Participation of recipients in scientific research.

Topic 4. Choosing a direction and planning research work: formation of a topic, planning, analysis of theoretical-experimental research and formulation of conclusions.

Topic 5. Medical and social scientific research: forms, types, methods of obtaining statistical information. Stages of statistical research.

Topic 6. The first stage of medical and social research: defining the goal and task of the research. Development of a plan and program, choice of object and subject, research base. Unit selection and sample size of the study.

Topic 7. Statistical tables. Layouts. Rules for their filling. Requirements for design of illustrations.

Topic 8. The second stage of medical and social research. Collection of statistical material. Definition of screening tests and their classification. Definition of anamnestic technologies. Filling out account cards. Checking the obtained results.

Topic 9. The third stage of medical and social research. Data processing and compilation using modern mathematical, statistical methods and information tools. Statistical grouping of the obtained results.

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Topic 10. Data entry, processing and visualization using the Microsoft Excel program.

Topic 11. The fourth stage of medical and social research. Analysis of the obtained results. Formulation of evidentiary conclusions. Development of practical recommendations. Literary and graphic presentation of statistical and sociological research results. Requirements for drawing up a list of used sources.

Theme 12. Epidemiological analysis as a component of scientific research: purpose, tasks and design. Types and features of epidemiological studies. Purpose and tasks.

Topic 13. Implementation of the results of scientific research and assessment of their effectiveness: implementation of completed research into practice, effectiveness of scientific research.

Topic 14. Scientific publications as a form of publicizing the results of scientific research. Preparation and general requirements for writing, designing and defending a scientific product.

Topic 15. Methods and types of visualization of the results of scientific research. General ideas about the presentation, its purpose and structure. Presentation requirements and elements.

List of recommended literature Main:

1. Gutorov AT. AND. Methodology and organization of scientific research :Tutorial. Kharkiv: KHNAU, 2017. 272 p.
2. Danilyan O.G., Beak O.P. Organization and methodology of scientific research: education manual Kharkiv: Pravo, 2017. 448 p.
3. Degtyarev A. V., Kokodiy M. G., Maslov V. O. Fundamentals of scientific research: study guide. Kharkiv: KHNU named after V. N. Karazina, 2016. 78 p.
4. DSTU 8302:2015. Information and documentation. Bibliographical link. General provisions and rules of compilation. Kyiv, 2016. 17 p.
5. Konverskyi A. Fundamentals of methodology and organization of scientific research. K.: Center of Educational Literature, 2017. 350 p.
6. Koryagin M. V., Chik M. Yu. Fundamentals of scientific research. Tutorial. 2nd ed.. K.: Alerta, 2019. 492 p.
7. Kostyukevich V. M., Konnova M. V. Methodology of scientific research: study guide. Vinnitsa. 2017. Vol. 172.
8. Malyhina V. D. Methodology of scientific research. Rivne. 2016. 247 p.
9. Methodology of scientific research: teaching. Manual / V. I. Zatserkovny, I. V. Tishaev, V. K. Demidov. – Nizhyn: NSU named after M. Gogol, 2017. – 236 p.
10. Methodology of scientific research in medicine: teaching. manual / V.D. Babajan, N.S. Bakumenko, O.I. Kadykova and others; under the editorship P.G. Kravchuna, V.D. Babajana, V.V. Meat eater. – Kharkiv: KhNMU, 2020. – 260 p.

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11. Shvets F. D. Methodology and organization of scientific research: teaching. manual Viche: NUVHP, 2016. 151 p.

12. Shcherbak T. I., Vazhynskyi S. E. Methodology and organization of scientific research: study guide. Sumy: A. S. Makarenko Sumy DPU, 2016. 260 p.

Additional:

1. Bhattacharjee AND. Methodology and organization scientific studies:research in socio-economic sciences / A. Bhattacherdzhi, N. I. Sytnyk. : studies Manual - K., 2016. - 159 p.

2. Yermakov O. Yu. Fundamentals of scientific research in economics: study guide. K.: Comprint, 2015. 177 p.

3. Law of Ukraine "On Higher Education".
<https://zakon.rada.gov.ua/laws/show/1556-18#Text>

4. Law of Ukraine "About scientific and scientific and technical activity".<https://zakon.rada.gov.ua/laws/show/848-19#Text>

5. Ministry of Education and Science of Ukraine. Order dated 12.01.2017 No. 40 "On approval Demand to design theses"
<https://zakon.rada.gov.ua/laws/show/z0155-17#Text>

6. Marcyn V.S. Basics of scientific research: teaching. manual [Electronic resource] / V. S. Marcyn, N. G. Mitsenko, O. A Danylenko. – Access mode: <http://www.infolibrary.com.ua/books-book-162.html>

EVALUATION

Forms and methods current control: oral (poll),practical (solving situational problems).

Current evaluation criteria in practical training

Perfectly "5"	It is presented to the applicant when he shows deep, solid and systematic knowledge in the scope of the curriculum, answers all questions without mistakes, reasonably formulates conclusions, using materials presented for independent work of the applicant, competently and consistently, with knowledge of the methodology, performed practical work; using scientific terms and concepts correctly.
Fine "4"	The acquirer reveals the main content of the educational material; gives incomplete definitions of concepts; admits inaccuracies in the use of scientific terms, vaguely formulates conclusions, performed practical work, but made minor mistakes during the research.
Satisfactorily "3"	The learner reproduces the main educational material, but when presenting it, he makes significant mistakes and makes simple mistakes

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	examples definition concepts insufficient, characterizes General questions.
Unsatisfactory "2"	The applicant discloses the content of the educational material fragmentarily, makes gross mistakes in the definition of concepts and when using terminology, did not complete the practical work.

Forms and methods of final control: Credit is awarded to an applicant who has completed all sections of the educational program of the elective discipline, has actively participated in seminars, has a current grade point average of at least 3.0, and has no academic debt.

The possibility and conditions of obtaining additional (bonus) points: not provided.

INDEPENDENT WORK OF HIGHER EDUCATION ACQUIRES

Independent work involves preparation for each practical session.

EDUCATIONAL DISCIPLINE POLICY

Deadlines and Rescheduling Policy:

- Absences of classes for non-respectable reasons will be worked out according to the schedule of the teacher on duty.
- skips with respectable reasons working out by individualschedule with the permission of the dean's office.

Academic Integrity Policy:

Observance of academic integrity by applicants is mandatory, and exactly:

- independent implementation everyone species works, tasks, forms control, provided by the work program of this academic discipline;
- references to sources of information in case of use of ideas, developments, statements, information;
- compliance with the legislation on copyright and related rights;
- provision of reliable information about the results of one's own educational (scientific) activity, used research methods and sources of information.

Unacceptable in educational activities for participants of the educational process are:

- the use of family or official ties to obtain a positive or higher grade during any form of control of academic performance or academic merit;

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- use of prohibited auxiliary materials or technical means (cheat sheets, notes, micro-earphones, telephones, smartphones, tablets, etc.) during control measures;
- going through procedures for monitoring the results of training by fake persons.
For violation of academic integrity, students may be held to the following academic responsibility:
- a decrease in the results of assessment of the control work, assessment in class, credit, etc.;
- retaking the assessment (test, credit, etc.);
- assignment of additional control measures (additional individual tasks, control works, tests, etc.);
- conducting an additional inspection of other works authored by the violator.

Attendance and Tardiness Policy:

Uniform: a medical gown that completely covers the outer clothing, or medical pajamas, a cap, a mask, and a change of shoes.

Equipment: notebook, pen, phonendoscope.

State of health: applicants suffering from acute infectious diseases, including respiratory diseases, are not allowed to attend classes.

A student who is late for class can attend it, but if the teacher has put "nb" in the journal, he must complete it in the general order.

Use of mobile devices:

Mobile devices may be used by students with the permission of the instructor if they are needed for the assignment.

Behavior in the audience:

The behavior of applicants and teachers in the classrooms should be working and calm, strictly comply with the rules established. Provisions on academic integrity and ethics of academic relations in Odesa National Medical University, in accordance with the Code of academic ethics and relations of the Odesa university community National Medical University, Provisions on prevention and detection of academic plagiarism in research and educational work students of higher education, scientists and teachers of Odesa National University medical university