**HARMONEE**

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**MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC**

**OSH STATE UNIVERSITY**

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**"Approved"**

At the meeting of the department \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Protocol No. \_\_\_\_\_\_ dated "\_\_\_\_\_\_" \_\_\_\_\_\_\_\_\_\_ 20\_\_\_

Head of Department \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

"\_\_\_\_\_\_" \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 20\_\_\_\_

**STUDENT PROGRAM**

**(SYLLABUS)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Course name** | **Lecturer** | **office hours** | **Contact Information** |
| **"Introduction to Public Health"** | **Mamazhanova Rakhat Kalmatovna**tel. +996555850127 | lecture | seminar | SIW | department\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-room\_\_\_00 -\_\_\_00 |
| 12a.h. | 18 a.h. | 30 a.h. |

**Credit - 2**

**Semester**-I

**Reporting**- exam

**Form of study:**full-time

The syllabus is compiled on the basis of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Osh city, 2022

**Aims of the discipline**

The purpose of teaching is to master theoretical knowledge for undergraduates, to form professional skills in the field of public health, as well as to form a future healthcare professional capable of making managerial decisions aimed at improving public health and modernizing the public health system.

Formation of universal, general professional and professional competencies of the master**"560100 - Public Health"** education of his professional and personal qualities on the basis of systemic knowledge and ideas in the field of healthcare, necessary for the effective management of a medical organization.

**Tasks:**

1. To teach methodology and techniques for assessing and managing public health;
2. To teach a systematic approach to the analysis of public health;
3. Build readiness to solve public health problems

**Short review**

Public health education reflects the social problems of all four components of medical activity: prevention, diagnosis, treatment and rehabilitation. The preventive orientation of medicine requires from medical specialists deep knowledge in the field of public health.

This module is an introductory module of the Master's program in Health and Safety. The module introduces masters to the basic concepts of health care and public health and their historical development. The determinants of health and their impact on the health of the population, as well as methods for the prevention and control of non-communicable and infectious pathologies, are considered in detail. The module introduces masters to the issues of qualitative data collection and the problems of registration of births, deaths and morbidity.

The knowledge gained in this module will serve as a prerequisite for the study of subsequent modules.

**Scoring Policy**

The control of knowledge and the quality of education aims to evaluate the work of a master student for a semester, the degree of assimilation of theoretical knowledge, to test the skills of independent work, to be able to synthesize the acquired knowledge and apply them in solving practical, professional problems.

For each topic, undergraduates pass current controls. For the purpose of intermediate testing of knowledge of undergraduates, midterm controls are carried out. The total score is 100.

The scale of academic performance is given below:

|  |  |  |  |
| --- | --- | --- | --- |
|  **Rating (points)** | **Grading by letter system** | **Evaluation digital equivalent** | **Assessment according to the traditional system** |
| 87-100 | A | 4.0 | Great |
| 80-86 | B | 3.33 | Fine |
| 74-79 | C | 3.0 |
| 68-73 | D | 2.33 | Satisfactorily |
| 61-67 | E | 2.0 |
| 31-60 | FX | 0 | unsatisfactory |
| 0-30 | F | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***Visit to class*** | ***oral questioning*** | ***situational******Task*** | ***Analysis interpretation*** | ***Quiz /PPT*** | ***Total*** |
| ***Topic1*** | ***5*** | ***10*** | ***5*** | ***5*** | ***5*** | ***thirty*** |
| ***Topic2*** | ***5*** | ***10*** | ***5*** | ***5*** | ***5*** | ***thirty*** |
| ***Topic3*** | ***5*** | ***10*** | ***5*** | ***5*** | ***5*** | ***thirty*** |
| ***Topic4*** | ***5*** | ***10*** | ***5*** | ***5*** | ***5*** | ***thirty*** |
| ***Topic5*** | ***5*** | ***10*** | ***5*** | ***5*** | ***5*** | ***thirty*** |
| ***Topic6*** | ***5*** | ***10*** | ***5*** | ***5*** | ***5*** | ***thirty*** |
| ***Theme 7*** | ***5*** | ***10*** | ***5*** | ***5*** | ***5*** | ***thirty*** |
| ***Theme 8*** | ***5*** | ***10*** | ***5*** | ***5*** | ***5*** | ***thirty*** |
| ***Theme 9*** | ***5*** | ***10*** | ***5*** | ***5*** | ***5*** | ***thirty*** |
|  |  |  |  |  |  | ***(NT/9)=30*** |

**Course policy.**

**Student Requirements**

1. Do not miss all types of classes without good reason;

2. Activity during practical classes;

3. Preparation for classes;

4. Do not be late for classes;

5. Do not engage in extraneous activities during class;

6. Be tolerant, open and friendly to fellow students and teachers;

7. Carefully treats the property of the department

8. Timely work off classes missed for good reasons.

9. Do not miss lectures without good reason, otherwise the student will be penalized (if you miss 1 lecture without a good reason, the penalty point is 0.66%).

**Thematic plan of the lecture material on the discipline "Introduction to Public Health"**

|  |  |  |
| --- | --- | --- |
| **No.** | **Lecture topic** | **Number of hours** |
| **1** | The scope and problems of public health. History and development of the discipline of public health in different countries (or countries of Central Asia). | **2** |
| **2** | Social determinants of health and disease. Social determinants of health: the availability of resources to meet everyday needs, such as educational and employment opportunities, a living wage, or healthy eating. | **2** |
| **3** | Determinants of health: poverty, equity and socioeconomic inequality. | **2** |
| **4** | Access to health care and public health. Combating health inequalities. Availability, accessibility, scarcity, acceptability and quality of medical care. Barriers to accessing health services: lack of accessibility, high cost, lack of insurance coverage, limited language access. | **2** |
| **5** | Prevention and control of NCDs and mental disorders.(Risk factors and interventions: alcohol, tobacco, unhealthy diet, lack of exercise, environmental pollution) | **2** |
| **6** | Antimicrobial resistance: a global multifaceted phenomenon. The fight against drug resistance. | **2** |

**Thematic plan of practical material on the discipline "Introduction to Public Health"**

|  |  |  |  |
| --- | --- | --- | --- |
| **Practical session****Subject** | **form of control** | **Hours** | **Max. score** |
| 1. Health and disease, The WHO definition of health, Winslow's definition of public health, The evolution of the meaning of public health, The origins of public health: an early history to the 1700s, | Test tasksRubric "Brainstorming" | 2 | thirty |
| 2.Social norms and attitudes such as discrimination; exposure to crime, violence and social disturbances such as the presence of garbage; social support and social interactions; | Small group work, presentation | 2 | thirty |
| 3. Review of determinants of health, definition of poverty, absolute poverty and relative poverty, multidimensional poverty index. | Presentation | 2 | thirty |
| 4. Environmental determinants of health.Water supply and sanitation, linking poor water supply and sanitation to various infectious diseases transmitted in various ways by helminths, protozoa, bacteria and viruses. | Essay | 2 | thirty |
| 5.Problems of reproductive health(Family planning, contraceptive use, unmet need for contraception; concept of “safe motherhood”, maternal mortality as a global health problem; sexually transmitted | - Business\role-playing game -- Tasks | 2 | thirty |
| 6. Infection prevention andfighting them. Health care related infections. (Risk of healthcare-associated infections; prevention of healthcare-associated infections) | TasksEconomic logic games (crossword, scanword, puzzles) | 2 | thirty |
| 7. Definition of AMR, mechanisms of antibiotic resistance, drug resistance of bacteria, superbugs, drug resistance of Mycobacterium tuberculosis, drug resistance of viruses and fungi, drug resistance of malaria parasites, | Group PEST analysis  | 2 | thirty |
| 8. Information system in support of public health. Telemedicine.Definition of an information system; information needs and tools at various levels of data collection; six components of HIS: health information system resources, indicators, data sources, data management, information products, dissemination and use; information system of the country; use of telemedicine in public health | Case study rubric Discussion | 2 | thirty |
| 9. Messages about death, birth and illness.(Rules for registering death and birth - death and birth certificates; crude birth rate and crude mortality rate; factors affecting mortality and birth rate of the population; sources of information on morbidity; methods for studying morbidity - the frequency and prevalence of diseases | Case studyPEST analysis rubric | 2 | thirty |

**Calendar-thematic plan of IWMS**

|  |  |  |
| --- | --- | --- |
| **No.** | **Topics for independent work of a master student** | **Number of hours** |
| **1** | Sanitation and education: 1800-1900s, Tropical medicine and public health as two new disciplines, Understanding lifestyle: 1900s-1980s, the era of global health, Declaration of Alma-Ata (1978) and Declaration of Astana (2018)) Review of definitions of health “Public health” appears in the 19th century. Development of international health | **2** |
| **2** | Access to the media and new technologies such as the Internet or cell phones; socioeconomic conditions such as concentrated poverty) | **2** |
| **3** | Poverty as social exclusion, the impact of poverty on health and ill health, socio-economic inequality in countries with different income levels; inequality in life expectancy, morbidity and mortality among the population | **2** |
| **4** | Effectiveness of water supply and sanitation in disease prevention; food and nutrition, food security, micronutrient deficiencies, strategies for addressing malnutrition in developing societies, environment, climate change; built environment such as buildings or transportation, workplaces, schools and recreation, housing, residences and neighborhoods, exposure to toxic substances and other physical hazards) | **2** |
| **5** | Infections as a problem of reproductive health, prevention and control of sexually transmitted infections. | **2** |
| **6** | Prevention: primary for causes and risk factors, secondary: screening) Diet, lifestyle and obesity | **2** |
| **7** | Antimicrobial resistance monitoring and analysis, World Antimicrobial Awareness Week, AMR prevention) | **2** |
| **8** | Factors that determine the health of adolescents, Socioeconomic inequalities in the development of NCDs | **2** |
| **9** | Malnutrition in children and adults. Recent and emerging developments in water supply and sanitation | **2** |
| **10** | Delay in seeking care for TB patients | **2** |
| **eleven** | Prevention of mother-to-child transmission of HIV Beyond the numbers. Analysis of maternal mortality and complications to improve pregnancy safety | **2** |
| **12** | Global action plan for vaccination. Regional vaccination action plans. Global action plan to combat antimicrobial resistance. Global Surveillance System for Antimicrobial Resistance and Use | **2** |
| **13** | Ways to improve the collection of health statistics. Global burden of disease | **2** |

**Learning outcomes (LO) and competencies of the undergraduate, formed in the process of studying the discipline "Introduction to Public Health"**

In the process of mastering the discipline, the undergraduate will achieve the following learning outcomes (LE) and will have the relevant competencies:

|  |  |
| --- | --- |
| **General educational program learning outcomes** | **PLO competencies** |
| **LO 4 -**Able and ready to organize and implement applied and practical projects and other activities to study and model social, economic, epidemiological and other conditions that affect the health and quality of life of the population; | **PC 3-Able and ready to plan, organize and implement measures to ensure the protection of public health;** |
| **LO-5 Capable and ready to plan, organize and administer public health events, develop regulatory, methodological and reporting documentation, as well as to patent work using the principles of healthcare management.** |  |

**Theme #1 Sanitation and Education: 1800-1900s, Tropical Medicine and Public Health as Two New Disciplines, Lifestyle Understanding: 1900s-1980s, the Age of Global Health, Declaration of Alma-Ata (1978) and Declaration of Astana ( 2018)) Overview of health definitions “Public health” appears in the 19th century. Development of international health**

**Control questions :**

1. Basic concepts and social conditioning of public health

2. History of the development of public health

3. The subject of public health

4. Public health practices

5. Understanding lifestyle: 1900s-1980s, the era of global health

6. Alma-Ata Declaration (1978) and Astana Declaration (2018))

7. Review of definitions of health “Public health” appears in the 19th century.

8. Development of international health

**Theme #2 Social norms and attitudes such as discrimination; exposure to crime, violence and social disturbances such as the presence of garbage; social support and social interactions.**

**Control questions:**

1. Social norms and attitudes
2. Socio-economic environment
3. Physical environment
4. Individual characteristics and human behavior
5. Crime exposure to violence and social unrest
6. Social support
7. Social interactions

**Topic #3 Review of determinants of health, definition of poverty, absolute poverty and relative poverty, multidimensional poverty index.**

**Control questions:**

1. Overview of determinants of health
2. Poverty and Inequality
3. Measuring inequality
4. Measuring poverty
5. Absolute and relative poverty
6. History of sociology
7. Multivariate poverty index.

**Topic №4 Environmental determinants of health. Water supply and sanitation, linking poor water supply and sanitation to various infectious diseases transmitted in various ways by helminths, protozoa, bacteria and viruses.**

**Control questions:**

1. Environmental determinants of health
2. Water supply and sanitation
3. Association of poor water supply and sanitation with various infectious diseases
4. Transmitted by various helminths
5. Transmitted by various protozoa
6. Transmitted by various bacteria
7. Transmitted by various viruses

**Topic №5 Problems of reproductive health. Family planning, contraceptive use, unmet need for contraception; the concept of “safe motherhood”, maternal mortality as a global health problem; sexually transmitted**

1. Reproductive health issues
2. Family planning
3. Use of contraception
4. Unmet need for contraception
5. The concept of “safe motherhood”
6. Maternal mortality as a global health problem
7. sexually transmitted infections

**Topic №6 Infection prevention and control. Health care related infections. Risk of healthcare-associated infections; prevention of healthcare-associated infections)**

**Control questions:**

1. Infection prevention and control
2. Health care related infections.
3. Risk of healthcare-associated infections
4. Prevention of healthcare-associated infections

**Topic №7 Definition of AMR, mechanisms of resistance to antibiotics, drug resistance of bacteria, superbugs, drug resistance of Mycobacterium tuberculosis, drug resistance of viruses and fungi, drug resistance of malaria parasites.**

**Control questions:**

1. Causes of Antibiotic Resistance
2. Factors that determine bacterial resistance to antibiotics
3. Bacterial conjugation and antibiotic resistance
4. Bacterial transposons and integrons and antibiotic resistance
5. Mechanisms of antibiotic resistance
6. Drug resistance of Mycobacterium tuberculosis
7. Drug resistance of viruses and fungi
8. Drug resistance of malaria parasites

**Theme №8 Information system in support of public health. Telemedicine.**

**Control questions:**

1. Information system definition
2. Information needs and tools at different levels of data collection
3. Six components of HIS
4. Health Information System Resources
5. Indicators, data sources
6. Data management
7. information products
8. Distribution and use
9. Country information system
10. Use of telemedicine in public health

**Topic #9 Messages about death, birth and illness.**

**Control questions:**

1. (Rules for registering death and birth
2. Death and birth certificates;
3. Crude birth rate and crude death rate
4. Factors affecting the mortality and birth rate of the population;
5. Sources of information on incidence
6. Morbidity study methods
7. Frequency and prevalence of diseases

**Literature:**

1. John Frank, Thomas Abel, Stefano Campostrini, Sarah Cook, Vivian K Lin, David V McQueen. The Social Determinants of Health: Time to Re-Think?/Int J Environ Res Public Health.2020 Aug 12;17(16):5856. doi: 10.3390/ijerph17165856.<https://pubmed.ncbi.nlm.nih.gov/32806743/>

2. Erin Shigekawa, Margaret Fix, Garen Corbett, Dylan H Roby, Janet Coffman. The Current State Of Telehealth Evidence: A Rapid Review/Health Aff (Millwood). 2018 Dec;37(12):1975-1982. doi: 10.1377/hlthaff.2018.05132.<https://pubmed.ncbi.nlm.nih.gov/30633674/>

3. Edward Joel Septimus. Antimicrobial Resistance: An Antimicrobial/Diagnostic Stewardship and Infection Prevention Approach/ Med Clin North Am. 2018 Sep;102(5):819-829. doi: 10.1016/j.mcna.2018.04.005. Epub 2018 Jun 27./<https://pubmed.ncbi.nlm.nih.gov/30126573/>

4. Abhinav Sharma, Robert A Harrington, Mark B McClellan et al. Using Digital Health Technology to Better Generate Evidence and Deliver Evidence-Based Care/ J Am Coll Cardiol. 2018 Jun 12;71(23):2680-2690. doi: 10.1016/j.jacc.2018.03.523.<https://pubmed.ncbi.nlm.nih.gov/29880129/>

5. Clemens Scott Kruse, Priyanka Karem, Kelli Shifflett, Lokesh Vegi, Karuna Ravi, Matthew Brooks. Evaluating barriers to adopting telemedicine worldwide: A systematic review/ https://pubmed.ncbi.nlm.nih.gov/29320966/

6 Schneider M.J. Introduction to Public Health. 6th edition. 2020

7. Virginia Berry, Martin Gorsky, Alex Mold. Public Health in History. 2011.

8. William N. Rom. Environmental Policy and Public health: air pollution, Global Climate Change, and Wilderness. 2011.

9. Health systems are in transition. Tajikistan. WHO European Observatory. 2016

10. Health systems are in transition. Kazakhstan. WHO European Observatory. 2007

11. Health systems are in transition. Kyrgyzstan. WHO European Observatory. 2011

12. The world health report: Financing health systems, the path to universal health coverage. WHO,

13. Health systems, health and wealth: assessing the case for investing in health systems. Josep Figueras, Martin McKee, Suszy Lessof, Antonio Duran, Nata Menabde. reference document. WHO EURO, 2008 -75 p.

14. World Bank, 2021. Tajikistan. country gender report. world bank. Washington, Columbia, p.68

15. REPORT of the fifth mid-term review of the implementation of the "National strategy for the health of the population of the Republic of Tajikistan for the period 2010-2020" Period 2011-2015.

16. National strategy for the health of the population of the Republic of Tajikistan for the period 2010 - 2020. Decree of the Government of the Republic of Tajikistan dated August 2, 2010, No. 368.

17. Report on Sustainable Development Goals, 2017. UNDP, New York, 2017. 64 p.

18. Health information system in developing countries. WHO, 2009

19. Framework and standards for country health information system. World Health Organization, 2012, p.71

20. Candace Currie Cara Zanotti Antony Morgan Dorothy Currie Margaretha de Looze Chris Roberts Oddrun Samdal RF Smith Vivian Barnekow.