#### AL-FARABI KAZAKH NATIONAL UNIVERSITY

**FACULTY OF MEDICINE AND HEALTHCARE**

**CHAIR OF EPIDEMIOLOGY, BIOSTATISTICS AND EVIDENCE-BASED MEDICINE**

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|  | **APPROVED**  **Dean of faculty**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (signature)**  **Kalmatayeva Zh.A.**  **"\_\_\_\_\_\_"\_\_\_\_\_\_\_\_ 2021г.** |

# TEACHING MATERIALS

**PiO3219**

**PATIENT AND SOCIETY**

**Field of education**

**6B101 Public Health**

**EDUCATIONAL PROGRAM**

**6B10104 Dentistry**

Grade – 3

Semester – 6

Credits 8

**Almaty, 2021**

Teaching programs of course is compiled on a base of Curriculum

**6В10104 DENTISTRY**

Reviewed and recommended at a meeting of the Chair of Epidemiology, Biostatistics and Evidence-Based Medicine from «\_\_\_ » \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2021, protocol N

Head of the chair \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mamyrbekova S.A.

(signature)

### Recommeded at a meeting of Faculty methodical bureau

«\_\_\_\_» \_\_\_\_\_\_\_\_\_\_\_ 2021., protocol N

Chair of Faculty methodical bureau \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ualyeva A.Е.

(signature)

#### Al-Farabi Kazakh National University

**Faculty of Medicine and Healthcare**

**Chair of Epidemiology, Biostatistics and Evidence-Based Medicine**

# Approved

**Dean of Faculty**

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Kalmatayeva Zh.A.

**"\_\_\_\_\_\_"\_\_\_\_\_\_\_\_ 2021**

**SYLLABUS**

**6 semester 2021-2022 ac.ys**

**Academic information about course**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Hours | | | | Number of credits |
| Code of discipline | Title | Type | ECTS |
| seminars | SIWT | SIW | |  |
| PiO 2217 | Patient and society | BD | 120 | 40 | 80 | | 6 |
| Course’s coordinator | Kozhabek Lyaila | |  | | | On schedule | |
| e-mail | [lailya\_kojabek@mail.ru](mailto:lailya_kojabek@mail.ru) | |
| Phone | +77019590652 | |

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|  | The goal of this course is a formation of knowledge and skills of evidence-based medicine for critical assessment of medical information and rational use in further practical activities; the ability to assess various external environmental factors in the context of the formation of pathology in a particular patient.  Teaching outcomes:  1. Identify health problems at the population level;  2. Be able to integrate scientific evidence with physician's clinical experience and patient values;  3. To be able to use conscientiously, accurately and meaningfully reliable results of clinical trials for a choice of particular patient’s treatment;  3. Possess knowledge, skills and abilities of basics of evidence-based medicine, which allow to critically evaluate medical information for rational use in further practice;  4. Apply exposure-oriented knowledge of disease’s epidemiology to assess various external environmental factors in context of a formation of pathology in a particular patient  5. Apply different approaches to understand social, economic and political forces that affect both the burden of disease and the ability of the health system to improve it.  6. Apply knowledge of outcome-based disease epidemiology to identify and improve the effectiveness of therapeutic and preventive health care programs.  7. Recognize and analyze ethical issues in practice that based on the ethical principles as a base of clinical care, research and professionalism in general;  8. Critically assess evidence and use it appropriately in clinical decisions and public health management in the context of national and global health policy.  9. Demonstrate adherence to the highest standards of professional responsibility and integrity; comply with ethical principles in all professional interactions;  10. Demonstrate needs for continuous professional training and improvement of their knowledge and skills;  11. Demonstrate skills of conducting scientific research, desires for new knowledge and transfer it to others;  12. Apply knowledge and skills of population’s heath surveillance, including epidemiological surveillance over infectious diseases;  13. Apply modern statistical methods of analysis in medical and biomedical research and independently use computer statistical programs. |
| Пререквизиты | Social medicine module |
| Постреквизиты | Community medicine module, Preventive medicine |
| Информационные ресурсы | **Module Epidemiology** |
| In Kazakh language |
| Basic references:  1. Покровский, В. И. Жалпы эпидемиология дәлелді медицина негіздерімен : практика-лык сабақтарға нұсқаулық / редакциясын басқарғандар В. И. Покровский, Н. И. Брико ; қазақ тіліне аударған және жауапты редакторы Н. Жайықбаев ; жалпы редакциясын басқарған С. Ә. Әміреев - Москва : ГЭОТАР-Медиа, 2015. - 448 с. - ISBN 978-5-9704-3384-3. - Текст : электронный // URL :  [http://www.studmedlib.ru/book/ISBN9785970433843. html](http://www.studmedlib.ru/book/ISBN9785970433843. html2) |
| Additional references:  1. Әміреев С. Ә., Темірбеков Ж. Т. Эпидемиология. Жалпы эпидемиология. 1-т. - Алматы: ЖАК-тың баспа орталығы, 2000. 552 б.  2.С.А. Әміреев, Қ.Құдайбергенұлы, Н. Жайықпаев, А.Жаханов. Жұқпалы ауруларға қатысты терминдерінің түсіндірме сөздігі.-Алматы.-2010.288 б. |
| In Russian Language |
| Basic references:  1.Принципы эпидемиологии в общественном здравоохранении. Введение в практическую эпидемиологию и биостатистику. Р.Дикер, Оффис эпидемиологических программ СДС, USAID.-2012.-457 c.  2. Общая эпидемиология с основами доказательной медицины. Под ред. В.И. Покровского, Н.И. Брико. Учебное пособие. М., ГЭОТАР-Медиа, 2010 г. 400 с.  3. Материалы тренинга по эпидемиологии. Модуль 1, 2, 3. Центрально-Азиатский Офис Американских центров по контролю и профилактике заболеваний. – февраль-май 2014. |
| Additional references:  4. Эпидемиология.Л.П.Зуева, Р.Х.Яхаев.Санкт-Петербург.-2008.-797с.  5. Ющук Н. Д., Мартынов Ю. В. Эпидемиология: Учеб. пособие. — 2-е изд., перераб. и доп. — М.: Медицина, 2003. — 448с., с.13-60  6. Ф.А.Искакова. Аналитическое исследование причин и структуры смертности от туберкулеза в некоторых регионах Казахстана. Монография. Астана.-2011.-174 с.  7.Ф.А.Искакова. Эпидемиология туберкулеза в Казахстане.Учебно-методическое пособие. Алматы.=2009.-128 с. |
| In English Language |
| Basic references:  8.Gordis, Leon, Epidemiology, 5th Edition, W.B. Saunders Company, 2013.-  9. Principles of Epidemiology in Public Health Practice, 3d Edition, CDC, US Department of Public Health, 2012  10. High-Yield Biostatistics, Epidemiology, & Public Health, 4th Edition  Kaplan USMLE, Lecture Notes, Behavioral Sciences and Social Science, 2017.-229p.  11. Wolfgang, A. Handbook of Epidemiology. 5 vol.//Ahrens Wolfgang, Peugeot Iris. - 2 ed.- Springer Reference, 2014. |
| Additional references:  12.Water, Sanitation, & Environmentally-related Hygiene//https://www.cdc.gov/ healthywater/hygiene/audience-healthprofessionals.html  13. Modern Epidemiology. 3rd Edition Keneth.J. Rothman, Sander Greenland, Timothy L. Lash.-2008.-158 p. |
| **Module Biostatistics** |
| In Kazakh Language |
| Basic references:  Раманқұлова, А. А. Биологиялық статистика: оқу құралы / А. А. Раманқұлова. - 2-бас. - Алматы : Ақнұр баспасы, 2019. - 210 б. |
| Additional references: |
| In Russian Language |
| Basic references:  1.Авива Петри, Кэролайн Сэбин. Наглядная медицинская статистика. Учебное пособие для вузов. М., ГЭОТАР-Медиа, 2015 г. 168 с.  2. Койчубеков Б.К. Биостатистика. Учебное пособие / Алматы, 2012 г.-70с. |
| Additional references:  1.Стентон Гланц. Медико-биологическая статистика. Электронная книга. Москва 1999.-  2.Медик В.А., Токмачев М.С., Фишман Б.Б. Теоретическая статистика // Статистика в медицине и биологии. В 2-х томах / Под ред. Проф. Ю.М.Комарова. – Т. 1. – М.: Медицина, 2000. – 412 с  3. Epi Info™. Инструмент для расследования вспышек. Центры по контролю и профилактике болезней. США.-2003.- 176 с. |
| In English Language |
| Basic references:  1. Fundamentals of Biostatistics.8th Edition. 7th edition. Bernard Rosner, Cangage Learning.-2016.-856 p. |
| Additional references:  1. Primer of Biostatistics. Seventh Edition. Stanton A. Glantz, Ph.-2009.-297p.  2. Epi Info for windows// www.cdc.gov/epiinfo /pc. html |
| **Module Evidence-Based Medicine** |
| In Kazakh Language |
| Basic references:  1.М.Д.Кульжанов, Р-К- Назарбаева, А.В.Костюк, Т.М. Мажитов, М. Т. Искакова, К.А.Гаркалов. Дэлелд1 медицинанын негiздерi: студенттерге, резиденттерге, магистранттарга, докторанттарга жэне денсаулык сактау саласынын кызметкерлерге арналган окулык - Астана, 2012. - 163 б. |
| Additional references:  1.Клиникаға дейінгі (клиникалық емес) және клиникалық зерттеулерді, медициналық-биологиялық эксперименттерді жүргізу қағидалары. ҚР Денсаулық сақтау министрінің 02.04.2018 № 142//http://adilet.zan.kz/ kaz/ docs/V090005932\_ |
| In Russian Language |
| Basic references:  1.Т.Гринхальх. Основы доказательной медицины. Москва, «ГЭОТАР-МЕД», 2009. 288 с.// https://drive.google.com/file/d/ 1YjJahATlz0-hSvP8W41w2qTWUxIV0rw2/ view?usp=sharing  2.Карл Хенеган, Дуглас Баденоч. Доказательная медицина. Карманный справочник. М., ГЭОТАР-Медиа, 2011 г. 144 с.  3.Основы доказательной медицины. Учебное пособие для системы послевузовского и дополнительного профессионального образования врачей./Под общей редакцией академика РАМН, профессора Р.Г.Оганова.– М.: Силицея-Полиграф, 2010. – 136 с.  4.Шарон Е.Страус, В.Скотт Ричардсон, Пол Глацейо, Р.Брайан Хэйнц. Медицина, основанная на доказательствах. М., ГЭОТАР-Медиа, 2010 г. 320 с.  5.Биомедицинская этика. Практикум. Под редакцией С.Д.Денисова, Я.С Яскевич-//Минск, БГМУ,2011,206 с. |
| Additional references:  1.Инструкция по пойску в Pubmed.  2.Об утверждении Правил проведения медико-биологических экспериментов, доклинических (неклинических) и клинических исследований. Приказ Министра здравоохранения РК от 02.04.2018 № 142// http://adilet.zan.kz/rus/docs/V090005932\_ |
| На английскоя языке |
| Basic references:  1.Evidence-Based Medicine. How to Practice and Teach EBM (3rd Edition).S.E. Straus, W.S. Richardson, Paul Glasziou, R. Brian Haynes.  2. Literature Reviews in Social Work. Robin Kiteley and Christine Stogdon.- 2014.-20 p. |
| Additional references:  1.Evidence-Based Answers to Clinical Questions for Busy Clinicians Work book.- 2009.-26p.  2.APPRAISAL OF GUIDELINES FOR RESEARCH & EVALUATION II. The AGREE Next Steps Consortium.-May 2009.-52 p. |
| Websites | 1.www.who.org  2. www.cdc.gov  3. www.medscape.com  4. www.oxfordmedicine.com  5. www.uptodate.com  6. www.medline  7. www.cockrane.library  8. https://pubmed.ncbi.nlm.nih.gov/  9. http://www.gbd.org/ |
| Academic policy of the course in context of university values | 1. **Rules of academic conduct:**   Personal appearance:   * dress code * clean ironed robe * medical cap * changeable shoes * badge with full name   + - 1. **Properly executed personal medical record.**  1. **Mandatory compliance with personal safety rules and occupational safety.** 2. **Wearing personal protective equipment during the epidemic period.** 3. Systematic preparation to educational process. 4. Accurate and timely maintenance of reporting documents. 5. Active participation in medical, diagnostic and social events of the departments.   Discipline:   * + Students are not allowed to be late for class or morning conference. If the student is late - the decision on admission to the lesson is made by the teacher leading the lesson. After the third delay, the student writes an explanatory letter to a head of the department indicating reasons for the delay and goes to the dean's office to obtain admission to class.   + Leaving class ahead of schedule, being outside the workplace during school hours is considered as absent.   + Additional work of students during school hours (during practical classes and on duty) is not allowed.   + A report about an expulsion is issued for students who have more than 3 passes without notifying the curator and a good reason.   + Missed classes are not completed.   + Students are fully subject to the Internal Order Rules of KazNU and clinical bases.   **Academic values:**  Academic honesty and integrity: independence in completing all assignments. Plagiarism, fake, crib notes, cheating at midterm and exam, disrespectful attitude towards a teacher are not allowed. |
| Grading policy and certification | **Criteria-based assessment:**  Evaluation of work by type of activity using checklists.  **Summative assessment:** final control of the discipline from 2 stages:  I. stage – MCQ testing for understanding and applying knowledge.  II. stage – short case.  The method of assessing SIW is the results of student’s scientific research. |

**Course content implementation calendar:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  | **Max.** | |
|  |  |  | **Time** | **scores** | |
|  | **Module 1. Epidemiology** |  |  |  |  |
| Class 1 | Introduction to Epidemiology. Causation. |  | 6 hours | 12 |  |
| Class 2 | Epidemiological methods and study design. Observational studies. Descriptive studies. |  | 6 hours | 12 |  |
| Class 3 | Introduction to Outcome-oriented Epidemiology. Case-control studies. |  | 6 hours | 12 |  |
| Class 4 | Introduction to Exposure oriented Epidemiology. Cohort studies. |  | 6 hours | 12 |  |
| Class 5 | Experimental research. RCT. |  | 6 hours | 12 |  |
| ISW 1 |  |  | 40 |  |
| Мodule 2. Biostatistics | | | | |  |
| Class 1 | Introduction to Biostatistics. Types of variables. Measures of the central tendency, measures of dispersion. Distribution types. |  | 6 hours | 12 |  |
| Class 2 | Qualitative Variables Handling Methods |  | 6 hours | 12 |  |
| Class 3 | Parametric criteria for assessing differences |  | 6 hours | 12 |  |
| Class 4 | Nonparametric Difference Evaluation Criteria |  | 6 hours | 12 |  |
| Class 5 | Correlation and regression analyzes |  | 6 hours | 12 |  |
| ISW 2 |  |  | 40 |  |
| **Module 3. Evidence-based medicine** | | | | |  |
| Class 1 | Evidence-based practice in healthcare. Hierarchy of evidence. |  | 6 hours | 12 |  |
| Class 2 | PubMed database, |  | 6 hours | 12 |  |
| Class 3 | Systematic review. Meta-analysis. |  | 6 hours | 12 |  |
| Class 4 | Prevention and Screening. Assessment of diagnostic criteria. Sensitivity and specificity. |  | 6 hours | 12 |  |
| Class 5 | Clinical Practice Guides (CRGs). Principles of development and implementation in practice. AGREE questionnaire |  | 6 hours | 12 |  |
| ISW 3 |  |  | 40 |  |
| Final exam on the course | |  | 100 |  |  |
| - I stage - MCQ testing for understanding and applying knowledge | | 25% | 50% |  |  |
| - II stage –short case | | 75% | 50% |  |  |