

Al-Farabi Kazakh National University
Faculty Medicine and Health Care
Education program on specialty:
“Medicine”

Syllabus on
Evidence-Based Medicine
Autumn semester 2019-2020 ac.year

Code of course	Name of course	Type	Number of hours/week			Number of credits	ECTS
			Lecture	Class	Lab		
SEMM 7302	Evidence-based Medicine		1	2	0	3	
Lecturer	Iskakova Farida Arkenovna MD, DMs KR, PhD RK, acting Associate Professor					Off /hours	On schedule
E-mail	E-mail: iskakovaf@gmail.com						
Telephone	Mob.: +7 701 101 3086					Classroom	Conference Hall
Academic Course Presentation	<p>Aim of discipline is to form in students a knowledge of principles Evidence-based medicine and skills and professional competencies for apply them into Clinical Practice.</p> <p>Upon completion of the course, the student will be able to</p> <ol style="list-style-type: none"> 1. Identify and define the concept of Evidence-Based Medicine 2. Recognize the 5-step process in Evidence-Based Practice 3. Understand the key research methods needed to locate medical evidence 4. Distinguish between various levels of evidence and their corresponding clinical study categories 5. Appraise the evidence based on validity, reliability, and applicability 6. Integrate and apply the evidence within a clinical setting. 						
Prerequisite and post requisite	Epidemiology, Biostatistics, Public Health						
Reading, sources	<p>Required Reading:</p> <ol style="list-style-type: none"> 1. Trisha Trinhalk. Bases of Evidence-based Medicine, 2010.-222 p. 2. AGREE II VERSIONS & UPDATES AGREE II Original Public Release and Publication Date: 2009/2010 AGREE II Update: September 2013 AGREE II Update: December 2017 3. Evidence-Based Medicine Guidelines. John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England.- 2005.- 1343 p. 4. Users' Guides to the Medical Literature: Essentials of Evidence-Based Clinical Practice, Third Edition (Uses Guides to Medical Literature) by Gordon Guyatt, 2015.-402 p. <p>Recommended Reading:</p> <ol style="list-style-type: none"> 1. Key topics. Evidence-based medicine. D.P.V. MqGoverin, R.M. Valori, W.S.M. Summerskill, M. Levi, 2001.-167 p. 2. AGREE II. Instrument. The AGREE next steps consortium, 2017.- 52 p. 						

	<ol style="list-style-type: none"> 3. Wolfgang, A. Handbook of Epidemiology. Vol.1//Ahrens Wolfgang, Peugeot Iris.- 2 ed.- Springer Reference, 2014.- 469 p. 4. Sackett DL, Rosenberg WMC, Gray JAM, Haynes RB, RW Scott: Evidence based medicine: what it is and what it isn't. Editorial. BMJ 1996; 312: 71–2. 5. The AGREE Reporting Checklist: a tool to improve reporting of clinical practice guidelines. BMJ 2016;352:i1152. doi: 10.1136/bmj.i1152. 6. KEY TOPICS IN EVIDENCE-BASED MEDICINE. Dermot P.B. McGovern, Roland M. Valori, William S.M. Summerskill, Marcel Levi, University of Amsterdam, The Netherlands, BIOS Scientific Publishers Limited, 2001.-167 p. 7. REVIEW ARTICLE Critical Appraisal of Scientific Articles Part 1 of a Series on Evaluation of Scientific Publications Jean-Baptist du Prel, Bernd Röhrig, Maria Blettner 8. Evidence Based Medicine – New Approaches and Challenges Izet Masic, Milan Miokovic, Belma Muhamedagic Faculty of Medicine, University of Sarajevo, B&H/PROFESSIONAL PAPER vol 16 no 4 DECEMBER 2008 9. Evidence-Based Medicine Guidelines/Duodecim Medical Publications Ltd, PO Box 713, 00101 Helsinki, Finland, 2000 10. International standards for clinical trial registries. 1.Clinical trials as topic - standards. 2.Registries – standards. I.WHO, 2012.-40 p. 11. EVIDENCE-BASED MANUAL MEDICINE: ISBN-13: 978-1-4160-2384-5 A PROBLEM-ORIENTED APPROACH. 2007 by Saunders, an imprint of Elsevier Inc., 325p. 12. Evidence-Based Medicine Guidelines. Editor in chief Ilkka Kunnamo. John Wiley & Sons Ltd, England.-1313 p. 13. EVIDENCE-BASED MANUAL MEDICINE: ISBN-13: 978-1-4160-2384-5 A PROBLEM-ORIENTED APPROACH Copyright © 2007 by Saunders, an imprint of Elsevier Inc. 2007/-325 p. 14. Clinical Practice Guideline Manual https://www.aafp.org/patient-care/clinical-recommendations/cpg-manual.html 15. AGREE tool https://www.agreetrust.org/practice-guidelines/ 16. AGREE II Training Tools <p>Electronic sources:</p> <p>www.who.org www.cdc.gov www.medline www.cockraine.library www.PubMed.</p>
<p>Academic policy of the course in the context of university ethical and moral values</p>	<p>Rules of academic conduct:</p> <p>Students are expected to attend class and be prepared to discuss reading material.</p> <p>Students who have 3 or more unexcused absences will receive a score of 0 for class participation.</p> <p>If IWS will passed a week later, it will be accepted, but the grade is reduced by 50%</p> <p>Academic values:</p>

	<p>Seminars are to be carried out individually.</p> <p>Plagiarism, forgery, using of cheat sheets, cheating at all stages of knowledge control are unacceptable.</p> <p>Students with disabilities can receive counseling at E-mail: iskakovaf@gmail.com</p>
Assessment and Certification Policy	<p>Criterial based assessment provides by assess of result outcomes according to descriptors (verification of competency formation at midterm control and exams).</p> <p>Summative assessment: assess student's attending, class activity and task executing.</p>

Course syllabus

Week/ Date	Topic	N of hours	Maxim. scores
1/28/10/19	Lecture 1. Principles of Evidence-based medicine. Role of Evidence-based medicine in Public Health.	1	
	Seminar 1. Definition and principles of Evidence-based medicine. History of development and role of Evidence-based medicine in Public Health. World experience.	2	14
2/06/11/19	Lecture 2. 5-step process in Evidence-Based Practice. First step - Asking answerable clinical questions or a clinical problem by using the PICO principle. PICOT.	1	
2/06/11/19	Seminar 2. 5-step process in Evidence-Based Practice. First step of EBM – Asking answerable clinical question or a clinical problem by using the PICO principle. Create a clinical example (task) on a given topic.	2	14
3/13/11/19	Lecture 3. Second step of EBM – Acquiring the highest quality evidence available by using the Internet and an Electronic Database.	1	
3/13/11/19	Seminar 3. Find information or evidence to answer question from the Internet and an Electronic Database. Database: Cochrane library, Trip Database, PubMed, Medline.	2	14
	MIWT 1		
	MIW 1		
4/20/11/19	Lecture 4. Clinical trails' Procedures and Design.	1	
	Seminar 4. Clinical trails' design: types, pyramid of evidence-based researches. Scope, interpretation of results, strength and limitation of Cross-Sectional, Cohort and Case-Control studies.	2	14
5/27/11/19	Lecture 5. Clinical trails' design.	1	
	Seminar 5. Clinical trials' design: Scope, Interpretation of results, strength and limitation of Randomized Clinical Trails.	2	14
	MT		
	Module II		

6/04.12.19	Lecture 6. Diagnostic Test: sensitivity and specificity. Likelihood ratio and prognostic value (negative and positive).		
	Seminar 6. Estimation of sensitivity and specificity of tests in Clinical Trials. Prognostic value of a negative and positive result.		
7/10.12.19	Lecture 7. The practical application of principles of Evidence-Based Medicine in diagnostic, etiological (risk assessment), prognostic and therapeutic purposes in medicine.	1	
	Seminar 7. The practical application of principles of evidence-based medicine in diagnostic, etiological (risk assessment), prognostic and therapeutic purposes in medicine.	2	14
	MIWT 2		
	MIW2		
8/17.12.19	Lecture 8. Systematic Review.	1	
	Seminar8. Definition and content of systematic review. Traditional literature review and systematic review. Evidence and weaknesses in systematic reviews.	2	
9/24.12.19	Lecture 9. Meta Analysis.	1	
	Seminar 9. Meaning of meta-analysis. Cochrane Collaboration. Cochrane library. Systematic and random errors.	2	14
10/31.12.19	Lecture 10. Grading of evidence and levels of recommendation.	1	
	Seminar10. Evidential value of various clinical trials' design. Classification of scientific research. The hierarchy of evidence. Levels of evidence: A, B, C, D. Classes of recommendations: I, II, II-a, II-b, III.	2	
	MIWT 2		
	MIW 2		15
	MT		
	Module III.		
11/7.01.20	Lecture 11. Step 3 of EBM.	1	
	Seminar 11. Step 3 of EBM – Appraising the clinical relevance and validity of the evidence in the current clinical environment. Critical appraisal and analysis of scientific publications from the perspective of evidence-based medicine. Tools of evaluation.	2	
12/14.01.20	Lecture 12. Steps 4 and 5 of EBM.	1	
14/01/20	Seminar 12. Step 4 of EBM- Applying evidence-based interventions in the current clinical environment. Step 5 of EBM – Assessing the efficacy and utility of EBM practice.	2	14
	MIWT 3		
	MIW 3		
13/21.01.20	Lecture13. Clinical practical guidelines: definition, principles of development and using in Medicine.	1	

	Seminar 13. Principles of EBM in development of Clinical Practical guidelines and recommendations. Types of clinical practical guidelines. Requirement and stages of development of Clinical Practical Guidelines and Recommendations. Strength and limitation of Clinical Practical Guidelines.	2	14
	MIWT 4		
	MIW 4		15
14/28.01.20	Lecture 14. AGREE system and evaluation of Clinical Practical Guideline.	1	
	Seminar 14. Evaluation of Clinical Practical Guideline with using AGREE system.	2	14
	MIWT 5		
	MIW 5		15
15/4.02.20	Lecture 15. Tests' sensitivity and specificity. Likelihood ratio and prognostic value (negative and positive).	1	
	Seminar 15. Tests' sensitivity and specificity. Likelihood ratio and prognostic value (negative and positive).	2	14
	MT on 14 and 15 classes item.		
	Final Exam.		100

Class assessment criteria

Criteria	12-14	9-11	6-8	0-5
	<i>Excellent</i>	<i>Good</i>	<i>Satisfied</i>	<i>Unsatisfied</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>F</i>
Classes 1-15	<ol style="list-style-type: none"> 1. The correct and complete answers to all theoretical questions are given; 2. The practical task is completely solved; 3. The material is set forth correctly with adherence to logical sequences; 4. It is demonstrated creative abilities. 	<ol style="list-style-type: none"> 1. The correct but incomplete answers to all theoretical questions are given and is admitted minor errors or inaccuracies; 2. The practical task is completed, however minor mistake made; 3. The material is set correctly with adherence to logical sequence. 	<ol style="list-style-type: none"> 1. The answers to theoretical questions are given correctly but they are incomplete and inaccurate in the wording and are logical errors; 2. The practical task is not fully completed; 3. The material is presented correctly but logical sequence is broken. 	<ol style="list-style-type: none"> 1. Answers to theoretical questions contain big mistakes. 2. The practical task is not completed. 3. The statement of the answer includes grammar and terminological mistakes, and logical sequence is broken.

Masters' Independent Work assessment criteria

Criteria	13-15	10-12	5-9	0-4
	<i>Excellent</i>	<i>Good</i>	<i>Satisfied</i>	<i>Unsatisfied</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>F</i>
MIW 1-5	<ol style="list-style-type: none"> 1. Understanding task. 2. The practical task is completely solved; 3. The material is set correctly in a logical sequence; 4. It is demonstrated creative abilities. 	<ol style="list-style-type: none"> 1. Understanding task and search references. 2 The practical task is completed but there is small mistake; 3. The material is set correctly in a logical sequence. 	<ol style="list-style-type: none"> 1. Not full understanding the task. 2. The practical task is not fully completed; 3. The material is presented correctly but logical sequence is broken. 	<ol style="list-style-type: none"> 1. Not full understanding the task. 2. The practical task is not completed. 3. The Independent work has a lot of crude mistakes and logical sequence is broken.

Schedule of MIW

Week / Date	Number of MIWT and MIW	Maximum scores
1/	MIWT 1. MIW 1 curries out consultation	
	MIW 1. Topic of 1-4 classes.	30
2/	MIWT 2. MIW 2 curries out consultation	
	MIW 2. Topic 6-7 classes	15
3/	MIWT 3. MIW 3 curries out consultation	
	MIW 3. Topic 8-9 classes	15
4/	MIWT 4. MIW4 curries out consultation	
	MIW 4. Topic 11-12 classes	15
5/	MIWT 5. MIW 5 curries out consultation	
	MIW 5. Topic 13-14 classes	15