



KEMENTERIAN RISET, TEKNOLOGI, DAN PENDIDIKAN TINGGI
UNIVERSITAS BRAWIJAYA
FAKULTAS KEDOKTERAN
PROGRAM MAGISTER ILMU BIOMEDIK

Jalan Veteran, Malang 65145, Jawa Timur – Indonesia
 Telp. (62)(341) 569117; 567192 Pes. 134, 135 – Fax. (62)(341) 564755
 E-mail: sekr.fk@ub.ac.id Website: <http://biomedical.fk.ub.ac.id>

Teaching Plan

Course Title : Clinical Epidemiology and Evidence-Based Medicine
Course Code : DKF6025
Credits : 2
Course Coordinator : Dr. dr. Siswanto, M.Sc.

Course Description

This course was designed with an overall goal is to introduce students to the application of epidemiologic principles and methods to problems encountered in clinical medicine. Subject areas cover basic epidemiology principles and methods, research designs and risk factors, biostatistics, diagnosis, treatment, prognosis, and evidence-based medicine.

Course Learning Outcomes

On successful completion of this course students will:		Bloom's Taxonomy
CLO1	Demonstrate a comprehensive understanding of the basic concepts of epidemiology principles and methods, including the definition and application of epidemiology, bias, and confounding, epidemiologic approach, research design in epidemiology.	Level 2. Understanding
CLO2	Demonstrate a comprehensive understanding of the applied statistics (parametric statistic vs. non-parametric statistic).	Level 2. Understanding
CLO3	Demonstrate a comprehensive understanding of the diagnosis, treatment, and prognosis.	Level 2. Understanding
CLO4	Able to critically appraise the epidemiologic studies (cross-sectional, case-control and cohort studies), clinical trial, diagnosis, treatment, and prognosis through journal reading.	Level 5. Evaluating
CLO5	Demonstrate self-directed learning and ethical standards for the intellectual activities.	Level 3. Applying

Links between CLOs and PLOs

	PLO1.1	PLO1.2	PLO2.1	PLO2.2	PLO2.3	PLO3.1	PLO3.2	PLO3.3	PLO3.4	PLO4
CLO1	√		√	√						
CLO2	√		√	√						
CLO3	√		√							
CLO4	√		√			√	√			√
CLO5							√			√

Topic and Schedule

Week	Topics	Competencies	Lecturer
1	Introduction of Epidemiology and EBM	Able to explain: the basic concepts of epidemiology principles and methods, including the definition and application of epidemiology, bias, and confounding, epidemiologic approach, research design in epidemiology.	SW
2	Bias and confounding	Able to explain: the basic concepts of epidemiology principles and methods, including the definition and application of epidemiology, bias, and confounding, epidemiologic approach, research design in epidemiology.	SW
3	Applied Statistics	Able to explain: the applied statistics (parametric statistic vs. non-parametric statistic).	SW
4	Applied Statistics (cont.)	Able to explain: the applied statistics (parametric statistic vs. non-parametric statistic).	SW
5	Written Exam		SW
6	Research design in epidemiology (Descriptive, cross-sectional study, case-control study, cohort	Able to explain: the basic concepts of epidemiology principles and methods, including the definition and application of epidemiology, bias, and confounding, epidemiologic approach, research design in epidemiology.	SM



KEMENTERIAN RISET, TEKNOLOGI, DAN PENDIDIKAN TINGGI
UNIVERSITAS BRAWIJAYA
FAKULTAS KEDOKTERAN
PROGRAM MAGISTER ILMU BIOMEDIK

Jalan Veteran, Malang 65145, Jawa Timur – Indonesia
 Telp. (62)(341) 569117; 567192 Pes. 134, 135 – Fax. (62)(341) 564755
 E-mail: sekr.fk@ub.ac.id Website: <http://biomedical.fk.ub.ac.id>

	study and randomized control trial)		
7	Critical appraisal of epidemiological studies and clinical trial	Able to critically appraise the epidemiologic study (cross-sectional, case-control and cohort studies) and clinical trial through journal reading.	SM
8	PICO and clinical questions	Able to explain: the principles of PICO (patient problem or population (P), intervention (I), comparison (C), and outcome(s) (O)), and clinical questions.	WB
9	Critical appraisal of epidemiological studies especially PICO	Able to critically appraise the PICO and clinical questions through journal reading.	WB
10	Diagnosis	Able to explain: the principles of epidemiologic study and EBM in diagnosis.	NS
11	Critical appraisal of epidemiological studies especially diagnosis	Able to critically appraise the epidemiologic study and EBM of the diagnosis through journal reading.	NS
12	Treatment	Able to explain: the principles of epidemiologic study and EBM in treatment.	NS
13	Critical appraisal of epidemiological studies especially treatment	Able to critically appraise the epidemiologic study and EBM of the treatment through journal reading.	NS
14	Prognosis	Able to explain: the principles of epidemiologic study and EBM in prognosis.	WB
15	Critical appraisal of epidemiological studies especially prognosis	Able to critically appraise the epidemiologic study and EBM of the prognosis through journal reading.	WB

Team of Lecturers:

SW : Dr. dr. Siswanto, M.Sc.
 SM : dr. Sumakto, Sp.A.(K)
 WB : Dr. dr. Wisnu Barlianto, M.Si.Med., Sp.A.(K)
 NS : dr. Nur Samsu, Sp.PD-KGH

Teaching and Learning Strategy

Core material will be delivered through lectures followed by discussions, completed with critical appraisals of a research article.

Assessment Methods

Type	Weighting	CLO Assessed	Description
Written exam	15%	1, 2, 5	The examination will be a 2-hour unseen paper with questions on clinical practice in pharmacology.
Journal Reading and Critical Appraisals (5 times)	85%	3, 4, 5	Journal critical appraisal is basically for the students to read articles from recent journals, and then appraise them critically in written form.



**KEMENTERIAN RISET, TEKNOLOGI, DAN PENDIDIKAN TINGGI
UNIVERSITAS BRAWIJAYA
FAKULTAS KEDOKTERAN
PROGRAM MAGISTER ILMU BIOMEDIK**

Jalan Veteran, Malang 65145, Jawa Timur – Indonesia
Telp. (62)(341) 569117; 567192 Pes. 134, 135 – Fax. (62)(341) 564755
E-mail: sekr.fk@ub.ac.id Website: <http://biomedical.fk.ub.ac.id>

Learning Sources

Essential reading/resources	<ol style="list-style-type: none">1. Principles of Epidemiology. An Introduction to Applied Epidemiology and Biostatistics2. Mark Woodward: Epidemiology study design and data analysis. 19993. Robert H. Fletcher: Clinical Epidemiology4. David L Sack: Clinical Epidemiology. 19915. Ann Bowling and Shah Ebrahim: Handbook of Health Research Methods. 20056. Mark Elwood: Critical Appraisal of Epidemiological Studies and Clinical Trials. 1998.
Further reading/resources	Scientific journals relevant to clinical epidemiology and EBM.

Course Coordinator,

Dr. dr. Siswanto, M.Sc.