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**PHCL 481 (1+1)**

**Evidence-Based Medicine**

**Course Syllabus- Spring 2012-2013**

**Course Description**

The aim of this course is to introduce the students to the concepts and practice of evidence-based medicine as it pertains to pharmacy profession. The students will learn the skills of evaluating the medical literature critically and to apply this skill to patient decision-making.

**Educational Objectives**

At the completion of EBM course, students should:

1. Understand the concept and practice of evidence-based medicine (EBM)
2. Learn the important glossary of EBM
3. Acquire an improved confidence and attitude related to retrieval, appraisal, application and peer discussion of published literature.
4. Value evidence in making medical decisions over opinion
5. Apply pre-learned knowledge of biostatistics, epidemiology when critically appraise evidence
6. Believe in the value of life-long evidence-based learning

**Course Learning Outcomes**

At the completion of the course, the student should be able to:

1. Describe the 5 steps of EBM
2. Define the following EBM glossary: level of evidence, relative risk, absolute risk, risk reduction, number needed to treat, number needed to harm,
3. Formulate a well-built clinical question
4. Conduct a focused literature search
5. Locate high quality medical information resources and know how to use them
6. Compare the different secondary resources of evidence-based medicine
7. Critically appraise articles, with focus on therapy and systematic reviews
8. Differentiate between disease and patient oriented evidence and how that impacts the GRADE of recommendation.
9. Evaluate the strength of evidence, including calculating and interpreting: absolute and relative risk reduction, number needed to treat, and confidence intervals.
10. Appraise clinical practice guidelines using the AGREE II instrument
11. Apply evidence to clinically relevant patient scenarios through group and individual activities
12. Use the above concepts when critically evaluating information from drug representatives.
13. Utilize electronic, digital and other technologies essential in practicing evidence-based medicine

**Course Day & Times**

Monday:

Classroom 32, Building 2, ground level

**Course Teaching Faculty**

SinaaAlakeel,PhD

Associate Professor

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Teaching Assistant

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**Course Resources**

**References and Textbooks**

* Users' Guides to the Medical Literature. Guyatt G, Rennie D, Meade MO, Compilation of JAMA article series (Reference is available with the instructor, access to JAMA is available through Library database)
* Evidence Based Medicine. [Sharon E. Straus](http://www.amazon.com/s/ref%3Dntt_athr_dp_sr_1?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Sharon%20E.%20Straus), [W. Scott Richardson](http://www.amazon.com/s/ref%3Dntt_athr_dp_sr_2?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=W.%20Scott%20Richardson), [Paul Glasziou](http://www.amazon.com/Paul-Glasziou/e/B0034PC5ZQ/ref%3Dntt_athr_dp_pel_3). 4th edition.

Availability of copies of the required chapters will be arranged by each Faculty

Supplemental materials will be provided by each faculty during class.

***Helpful online resources/Tutorials***

Centre for Evidence-Based Medicine in Oxford. <http://www.cebm.net/>

***There are many useful resources and tutorial over the internet.***

**Course Outline**

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| --- | --- | --- | --- | --- |
| **Week** | **Date** | **LectureTopic** | **TF** | **LabActivity** |
| 1 | 28-Jan | Introduction to EBP | GB | Pre-Fresno survey, pre-assessment |
| 2 | 4-Feb | Asking Clinical Question: PICO Question and Hierarchy of evidence | GB | exercise on formulating questions |
| 3 | 11-Feb | Searching for evidence | GB | Exercise on searching for evidence |
| 4 | 18-Feb | Critically appraising articles on therapy | GB | exercise on critical appraisal on therapy |
| 5 | 25-Feb | Critically appraising articles on Harm, Diagnosis/Prognosis | GB | Journal Club 1: Student presentations gps 1 to 4 |
| 6 | 4-Mar | **Mid Term Exam 1**(covers Lect 1 thru 4) |  GB | Clinical Case scenario |
| 7 | 11-Mar | Applying the evidence 1 | GB | exercise on interpreting the results |
| 8 | 18-Mar | Applying the evidence 2 | GB | Journal Club 1: Student presentationsGps 5-8 |
| 9 | 23-Mar | Mid semester Break |
| 10 | 1-Apr | Understanding Systematic reviews and meta-analysis 1 | SA | exploring foraging and hunting tools to keep up with evidence |
| 11 | 8-Apr | Understanding Systematic reviews and meta-analysis 2 | SA | Exercise on critical appraisal of systematic review |
| 12 | 15-Apr | Introduction to Knowledge Translation | SA | Journal Club 2: Student presentationsGps 1-4 |
| 13 | 22-Apr | What makes a good clinical practice guideline: IOM report | SA | Exercise on appraising CPG using AGREE II |
| 14 | 29-Apr | **Midterm Exam 2**(covers lect 8 thru 11) |  SA | Drug monograph for P&T committee |
| 15 | 6-May | Evaluating article about economic analysis. | SA | Appraising articles on economic analysis  |
| 16 | 13-May | EBM impact on policy decisions | SA | Journal Club 2: Student presentationsGps 5-8Post Fresno survey, post assessment |

**Grade distribution:**

|  |  |
| --- | --- |
| Activity | Points |
| 2 Midterm exams | 20 |
| Pre-lecture quizzes | 5 |
| Lab activities/assignments | 30 |
| Professionalism | 5 |
| Final Exam  | 40 |
| Total  | 100 |

**COURSE POLICIES**

A. Course Format:

During this course the following mode of teaching can be used: formal and informal Lectures, discussion, debates, pre-class quizzes, self-directed learning.

Course Tools/Requirements

This course requires the student to:

* Spend no less than 4 hours of off-class time on self learning and studying
* Read the assigned material before coming to the class
* Acquire personal lab top with wireless connection to the internet (be prepared to bring your computer in every lecture/lab.
* King Saud University email user name account
	+ To access KSU library and to communicate about the course in particular, regarding the assignments.

B. Assessment tools:

* + - Exams /quizzes
		- Assignments:
			* *the nature of the assignments will be individually emailed to students every Wednesday.*
		- Informal presentations
		- Formal presentation
		- Self assessment surveys (pre and post)
		- Team assignments

B. Exam Format:

* Written exams mainly consist of, but not limited to: one correct answer multiple choice questions, short notes, matching, organize a list and fill in blanks. Questions can be direct recall of information, case scenario, and calculations.

C. Late assignments/homework Policy or missed Quizzes/Midterm exams:

* Late assignments/homework will be penalized by **5% reduction** in grade **per each passing day.**
* the instructor **has the right** to determine the method for midterm/quiz make up by any of the following:
	+ - increasing the percentage of the remaining exams to cover the missed exam
		- assigning the final exam a higher percentage to cover the missed exam for the student
		- a make-up exam (mostly short note style)
		- In the final exam, the section relating to the missed examination material can be used as the grade for that missed exam.
		- Make up exam should be performed as per college policy. Valid documents about the absence MSUT be submitted by students within 2 weeks of the absence date.

D. Attendance Policy:

* Students are expected to prepare for, attend and participate in all lectures and labs.
* Student must exercise **punctuality** in attending classes and labs.
* Students missing 25% or more on attendance are forbidden from setting in the final exam, per University Policy. Documents of proof ofstudent absence MUST be submitted within 2 weeks.
* A student absent from class bears full responsibility for all material covered in class. Quizzes may be given anytime during the class period; therefore, please be on time and plan to attend the entire period. Missing a lab activity or a quiz due to l***ate arrivals or early departure will not be made up.***
* If you anticipate having to leave class early, please let your instructor knows before the beginning of class.
* Unprofessional conduct including misbehavior during lectures/labs will not be tolerated and may result in actions leading up to dismissal from the course.
* Cell phone must be turned off or muted at all times during lecture and labs.

E. Academic Dishonesty/plagiarism/professionalsim

* Students are expected to demonstrate **professionalism** and **honesty** during this course.
* Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating of information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.
* Professionalism includes many aspects, among which: student act responsibly through their actions, attitude and appearance.

F. Syllabus Changes

* The course coordinator reserves the right to make changes as necessary to this syllabus. If changes are necessitated during the term of the course, the instructor will immediately notify students of such changes both by email communication and posting both notification and nature of change(s) on the course bulletin board.

G. Errors in Grading

* Errors in grading must be adjudicated by the instructor. If you believe that your work has been incorrectly graded (e.g. points were added up incorrectly), you must contact the instructor immediately in writing and clearly state the error you believe has occurred. The instructor of the course will always determine the final grade.

H.E-mail Policy

Please note that the following applies to all emails sent to any member of PHCL 481 course teaching faculty.

* Students should include their full name, course number and lecture section in every email.
* All emails should be sent from your KSU account or an appropriately identifying email with student’s NAME. Emails from alias emails (e.g. butterfly@, noufyloofy@etc) will NOT be responded to.
* Every email must have a subject title indicating the purpose of the email
* When writing emails please use proper courtesy and use PROPER Arabic or English.
* If you are submitting an assignment, all your identifying information should be inside the text of the attachment
* Emails should not be used to discuss personal problems, issues with grades, or problems with other students or other instructor. These emails will not be responded too, and these issues should be discussed in person.
* Emails not related to the course should not be sent to the instructors and if they are, no further email will be received from that email address, and the student may risk disciplinary actions per University Policy.

I. Course Evaluation

* An evaluation of the full course and course faculty will be administered towards the end of the course. Additionally, individual faculty may ask for an evaluation of their lecture(s)

**Course Binding Agreement (PHCL 481)**

The Course binding agreement has to be signed by each student and returned through the class leader to the course instructor before the third lecture. *Failure to submit this paper will attest to the student had read and agreed on the information contained therein*.

“I have read this syllabus, understand its implications (and have sought clarification of those parts that were unclear to me), and will abide by it.I understand that the course coordinator has the right to make alterations to the class and exam schedule as needed.”

Name of Student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

University ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Student: \_\_\_\_\_\_­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_