Principles of Scientific Literature Evaluation

PHRM 3520
Winter 2020

Credit hours: 4
Class contact hours: 52

SCHEDULE
Monday 1:00 - 2:30 1st floor LT
Wednesday 12:30 - 2:00 Basement LT
Friday 1:00 – 2:30 1st floor LT

Course Coordinator:

Dr. Sherif Eltonsy
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Instructors:

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Mr. Kyle MacNair
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Dr. Jamie Falk
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Dr. Joseph Delaney
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Office Hours: by appointment

Purpose of the Course:

Upon completion of this course, the student will be able to effectively understand, evaluate and utilize literature and evidence-based medicine to substantiate decisions related to the provision of pharmaceutical care.

Course Objectives

Course Objectives At the completion of this course, the student should be able to:	**AFPC Outcome Achieved**	**NAPRA Competency Achieved**	**Learning Level** (ICE – Ideas, Connections, Extensions)	**Performance Level** (Novice, Functional, Competent)
1. Describe data formats and patterns in biomedical data.	CP 2.2	6.1	Ideas	Competent
2. Describe, calculate and interpret basic statistical inferential statistics (t-test, ANOVA, etc.).	SC2.3	6.1 & 6.2	Connections	Functional
3. Assess the assumptions and concepts behind the choice of a statistical test.	SC2.3	6.1 & 6.2	Extensions	Novice
4. Define Evidence-based medicine (EBM).	SC1.1	6.1	Ideas	Competent
5. Describe and recognize the value of using EBM skills in daily practice.	CM1.3	6.3	Connections	Competent
6. Employ bibliographic databases in answering clinical questions.	SC2.1, SC2.2	6.3	Connections	Functional
7. Distinguish between various study designs (observational, RCT, qualitative, etc.) and interpret their relative value and application to practice.	SC2.3	6.1 to 6.3	Extensions	Functional
8. Describe, compute and interpret basic medical statistics (ARR, RRR, OR, NNT, NNH, etc.).	SC2.3	6.2	Extensions	Competent
9. Critique and appraise medical and pharmaceutical literature (emphasis on Randomized Controlled Trials, Clinical Practice Guidelines, and Systematic Reviews) in order to formulate and recommend relevant clinical guidance.	SC2.3	2.5, 6.2 & 6.3	Extensions	Functional
10. Assemble and present the findings of literature evaluation to medical and lay people in a concise and appropriate manner.	CM1.3, CM1.6,CL1., SC4.1	2.5, 6.2 & 6.3	Extensions	Competent

Assumed Background:

- Successful completion of the Drug Information component of Pharmacy Skills Labs 1 and 2 (PHRM 1110 & 2100)

Teaching and Learning Methods:

Students are expected to act as independent learners and are responsible for:

- Mastery of the basic subject matter by recalling facts and principles (knowledge) and through interpreting and extrapolating this knowledge (comprehension)
- Development of higher cognitive abilities by utilizing knowledge and principles in order to solve a problem (application) and
- Application of knowledge to make clinical recommendations

Assessment criteria and grading:

Allocation of Total Marks:

Assessment:		
Quizzes	30%	Jan 29th and Feb 28th
Journal Club Assignment & Reading Assessment	20%	March 2nd – 13th
Final Examination	50%	March 27th to April 13th, 2020
	100%	

The total of all the above evaluations will be translated into the following letter grades:

≥90%	A+	65-69%	C+
80-89%	A	60-64%	C
75-79%	B+	50-59%	D
70-74%	B	<50%	F

Late Submissions

Assignments which are not submitted on the specified due date will receive a zero grade unless specific arrangements have been approved by the coordinator in exceptional circumstances.

Course Technology:

It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical and legal manner. Students can use all technology in classroom settings only for educational purposes approved by the instructor and/or the University of Manitoba Student Accessibility Services. Students should not participate in personal direct electronic messaging / posting activities (e-mail, texting, video or voice chat, wikis, blogs, social networking (e.g. Facebook) online and offline "gaming") during scheduled class time. Course materials are provided on UM Learn and can be accessed electronically at https://universityofmanitoba.desire2learn.com/d2l/login

Voluntary Withdrawal (VW):

Course feedback and assessment will be provided before the voluntary withdrawal (VW) date. For the 2019-2020 academic year, the VW date for this course is March 8, 2020. PLEASE NOTE HOWEVER, STUDENTS CONTEMPLATING VOLUNTARILY WITHDRAWING FROM A COURSE SHOULD SPEAK TO THE DEAN'S OFFICE BEFORE DOING SO. THERE ARE SIGNIFICANT CONSEQUENCES OF WITHDRAWING FROM A COURSE DURING THE PROFESSIONAL PROGRAM.

Academic Integrity (Plagiarism, Cheating and Personation):

Please review the official College of Pharmacy Policies on Plagiarism and Cheating, clearly outlined in your Pharmacy Student Handbook for 2019-2020 and the University of Manitoba Academic Calendar at:
http://crscalprod.ad.umanitoba.ca/~/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=380&chapterid=4647

These policies directly apply to this course.

Student Accessibility Services (SAS):

If you are a student with a disability, please contact SAS for academic accommodation supports and services. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation. The coordinator of this course is willing to meet with students to discuss accommodations recommended by SAS.

Student Accessibility Services *http://umanitoba.ca/student/accessibility/index.html*

520 University Centre

204-474-7423

Student_accessibility@umanitoba.ca

Recommended texts, electronics and references:
No required text, reading as assigned.

All students should have available a portable device (laptop, smart phone) that can access the internet for some class exercises.

Student Support:

Please refer to the attached Schedule "A" for a list of student supports provided by the University of Manitoba.

Lecture Timetable:

Date	Time	Lecture Topic	
Friday, Jan. 3, 2020	1:00 - 2:30	Introduction to EBM - Setting the Stage	**Falk**
Monday, Jan. 6, 2020	1:00 - 2:30	Introduction to Statistics - Describing Data	**Delaney**
Wednesday, Jan. 8, 2020	12:30 - 2:00	Statistical Inference - Hypothesis testing (Comparing 2 groups)	**Renaud**
Friday, Jan. 10, 2020	1:00 - 2:30	Statistical Inference - Hypothesis testing (Comparing 2 groups)	**Renaud**
Monday, Jan. 13, 2020	1:00 - 2:30	Life Tables	**Renaud**
Wednesday, Jan. 15, 2020	12:30 - 2:00	Analysis of Qualitative Data	**Renaud**
Friday, Jan. 17, 2020	1:00 - 2:30	Tests of Association / Correlation	**Renaud**
Monday, Jan. 20, 2020	1:00 - 2:30	Medical Statistics and Outcome Measures	**Delaney**
Wednesday, Jan. 22, 2020	12:30 - 2:00	Statistical Inference - Analysis of Variance (Comparing multiple Groups)	**Renaud**
Friday, Jan. 24, 2020	1:00 - 2:30	Statistical Inference - Analysis of Variance (Comparing multiple Groups)	**Renaud**
Monday, Jan. 27, 2020	1:00 - 2:30	Summary and review	**Renaud**
Wednesday, Jan. 29, 2020	12:30 - 2:00	Quiz #1 15%	**Renaud**
Friday, Jan. 31, 2020	1:00 - 2:30	RCT Design and Critical Appraisal	**Eltonsy**
Monday, Feb. 3, 2020	1:00 - 2:30	RCT Design and Critical Appraisal	**Eltonsy**
Wednesday, Feb. 5, 2020	12:30 - 2:00	RCT Design and Critical Appraisal	**Eltonsy**
Friday, Feb. 7, 2020	1:00 - 2:30	Non-Inferiority Trials	**Eltonsy**
Monday, Feb. 10, 2020	1:00 - 2:30	EBM Resources	**McNair**
Wednesday, Feb. 12, 2020	12:30 - 2:00	Library Workshop	**Le**
Friday, Feb. 14, 2020	1:00 - 2:30	Systematic Review and Meta-analysis	**Eltonsy**
Monday, Feb. 17, 2020	*1:00 - 2:30*	***Spring Break***	***No class***
Wednesday, Feb. 29, 2020	*12:30 - 2:00*	***Spring Break***	***No class***
Friday, Feb. 21, 2020	*1:00 - 2:30*	***Spring Break***	***No class***
Monday, Feb. 24, 2020	1:00 - 2:30	Introduction to Journal Club	**Eltonsy**
Wednesday, Feb. 26, 2020	12:30 - 2:00	Clinical Practice Guidelines	**Falk**
Friday, Feb. 28, 2020	1:00 - 2:30	Quiz #2 15%	**Eltonsy**
Monday, March 2, 2020	1:00 - 2:30	JC Presentations and Reading Assessment	**Eltonsy**
Wednesday, March 4, 2020	12:30 - 2:00	JC Presentations and Reading Assessment	**Eltonsy**
Friday, March 6, 2020	1:00 - 2:30	JC Presentations and Reading Assessment	**Eltonsy**
Monday, March 9, 2020	1:00 - 2:30	JC Presentations and Reading Assessment	**Eltonsy**
Wednesday, March 11, 2020	12:30 - 2:00	JC Presentations and Reading Assessment	**Eltonsy**
Friday, March 13, 2020	1:00 - 2:30	JC Presentations and Reading Assessment	**Eltonsy**
Monday, March 16, 2020	1:00 - 2:30	Observational Research	**Delaney**
Wednesday, March 18, 2020	12:30 - 2:00	Observational Research	**Delaney**
Friday, March 20, 2020	1:00 - 2:30	Observational Research	**Delaney**
Monday, March 23, 2020	1:00 - 2:30	Qualitative Research	**Delaney**
Wednesday, March 25, 2020	12:30 - 2:00	Qualitative Research	**Delaney**
Wednesday April 1st	1:00 - 4:00	Final Exam 50% Basement Lecture Theatre	**Eltonsy**