

**The University of Western Ontario
Faculty of Health Sciences**

Health Sciences 4800G: Methods in Evidence-Based Practice

Tuesdays* 10:30am – 1:30am, Talbot College Room 201

*see tentative lecture schedule for class dates and times

<http://owl.uwo.ca/>

Instructors	Office	Phone	E-mail	Office Hours
1) Dr. Shauna Burke	HSB 216	Ext. 82214	sburke9@uwo.ca	By appointment
2) TBA				

1.0 CALENDAR DESCRIPTION

Students will learn to apply previously learned statistical and methodological information in the systematic evaluation of published research in health sciences. Topics covered will include the systematic appraisal of quantitative and qualitative research articles, the critical appraisal of best practice guidelines, and an introduction to the art of scientific writing.

Prerequisites: Health Sciences 3801a/b (or the former 3800F/G).

*Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

2.0 COURSE MATERIALS

Course Readings

Students will be assigned several readings throughout the duration of the course. These readings correspond to the lecture topics and will be identified at the end of each lecture. Readings may be posted on the course website at any time (located by logging in to WebCT OWL: <http://owl.uwo.ca/>)*. Students are responsible for the content of **all** required readings.

*Students should log in to WebCT OWL on a regular basis (<http://owl.uwo.ca/>) using their UWO username and password for access to the HS 4800G course web-page.

Course Text

Publication Manual of the American Psychological Association (2010, Sixth Edition). American Psychological Association.

3.0 COURSE OVERVIEW AND FORMAT

The primary goal of HS 4800G is to provide students who are interested in pursuing graduate studies with an opportunity for the continued development of reasoning and writing skills based on the integration of research evidence and critical thinking into practice. More specifically, students will gain and/or develop:

- ✓ The skills necessary to critically appraise published research
- ✓ An understanding of the role of research evidence in the field(s) of health studies
- ✓ Knowledge of the methods and designs used in health-related research
- ✓ Knowledge and experience related to the “art” of scientific writing
- ✓ Experience presenting conference-style (i.e., poster or lecture) presentations
- ✓ An in-depth knowledge of all aspects of scholarly writing, including ethical guidelines and APA formatting

TENTATIVE LECTURE SCHEDULE

Changes to this lecture schedule (including change of locations) will be announced in class and on the course website.

Tuesday January 4, 2011	Introduction to Evidence-Based Research
Tuesday January 11, 2011	The Nature of Research Generation of the Evidence-Based Research Question
Tuesday January 18, 2011	The Art of Scientific Writing
Tuesday January 25, 2011	Library Information Session: Database Searches
Tuesday February 1, 2011	Introduction to APA Guidelines Preparing (Lecture and Poster) Conference Presentations
Tuesday February 8, 2011	Academic CV Building Workshop Introduction to the Publication Process
Tuesday February 15, 2011	Introduction to Grant Writing Graduate School/Professional Applications
Tuesday February 22, 2011	READING WEEK
Tuesday March 1, 2011	Critical Appraisal of Qualitative Methods
Tuesday March 8, 2011	Critical Appraisal of Quantitative Methods
Tuesday March 15, 2011	Critical Appraisal of Reviews and Meta-Analyses
Tuesday March 22, 2011	Introduction to Knowledge Translation

Tuesday March 29, 2011 Conference Presentations

Tuesday April 5, 2011 Conference Presentations

4.0 EVALUATION

In this course, your evaluation will be based on participation and attendance in class, as well as the completion of: (a) in-class assignments, and (b) various components of a critical review on a topic of your choosing. This review will be evaluated in stages throughout the course, and you will also be expected to give a conference-style presentation to the class during a specified week in the second half of the course. Due dates and course weightings are as follows:

Participation/Attendance	10%
In-Class Assignments	
1. Database Search Assignment <i>Due February 1</i>	2.5%
2. Academic CV Assignment <i>Due February 15</i>	2.5%
3. Graduate School Application Assignment <i>Due March 1</i>	2.5%
4. Critical Review Assignments #1, #2, and #3 <i>Due March 8, 15, and 22, respectively</i>	7.5% (2.5% each)
Critical Review	
Part I: Generation of the Evidence-Based Research Question (Introduction) <i>Due January 18</i>	20%
Part II: Methods <i>Due February 15</i>	10%
Part III: Results and Discussion <i>Due March 29</i>	20%
Conference Presentation	
Conference Proceedings <i>Due March 22</i>	10%
Oral (Poster or Lecture) Presentation <i>Presentation Dates: March 29, April 5</i>	15%

4.1 Participation/Attendance

Three classes throughout the course (from March 1st to March 15th) will be devoted to ‘hands-on’ critical appraisals of various health-related research articles. You will be required to read specific articles before coming to class, arriving prepared to answer questions in class about the methodology used, and the suitability of the study as evidence for the question being asked. In addition to the written assignments, your participation during these classes will be worth 2.5% of your final grade. In addition, the final two classes of the course (March 29th and April 5th) will be

devoted to class (conference) presentations. In addition to presenting, you will be expected to participate in a *mandatory critical question period* during which you will ask peers critical questions related to their presentations. Your participation in these final two classes will be worth 2.5% of your final grade.

In addition to this participation requirement, you are also required to maintain satisfactory attendance throughout the course (worth 5% of your final grade). To receive this 5%, you must attend **all 10** lecture sessions (from January 4th to March 22nd) and **both** of the conference presentation sessions (from March 29th and April 5th). Any further absence must be specifically documented as being due to an acute medical condition, or due to compassionate reasons.

4.2 Critical Review

Evaluation of your critical review will be divided into the three components listed under section 4.0. Your performance within each component of the assignment will be graded numerically. All written assignments required for this critical review (including the conference proceedings) are to be completed and submitted in APA format. Page limits do not include references.

4.2.1 Generation of the Evidence-Based Research Question (Introduction)

For this assignment, you will choose a topic that is relevant to your interests within health sciences, and present **relevant background** information within that area. The final product of this component should be a clearly articulated research question that is based solidly on published research evidence. *Note that in the Results section (due March 29th), you will be asked to review all of the literature that is available to answer your research question – not simply a subset of the literature.* Thus, if it appears that you have ‘too much information’, you will be advised to narrow the focus of your research question. If you have ‘too little information’, you will be required to broaden the focus of your research question. You will produce a short (less than four pages) Introduction (including literature review, rationale for choosing a specific question/topic, and your research question).

4.2.2 Methods

In this section of your critical review you will be asked to describe in detail your inclusion and exclusion criteria (e.g., eligible research designs, time period in which studies need to be conducted, possible cultural restrictions, etc.) as well as your search strategies (i.e., how your literature search was conducted, including an overview of keywords used and databases searched) and any other pertinent methodological information. This section should be less than 3 pages in length.

4.2.3 Results and Discussion

The Results section of your critical review will constitute a critical evaluation of your assembled materials. Thus, you will evaluate the methodological strengths and weaknesses of each of the articles that you will be appraising. Some of the methodological components that you should consider are the measurement tools (i.e., questionnaires, outcome measures), the sampling methodology, and the extent to which the experimenter has adequately controlled for experimental confounds. In addition to this, you are to summarize each article in an easily digestible format, providing a

comprehensive analysis of the suitability of each article for answering your research question. If the articles you are evaluating are available electronically through our library system, a full reference will suffice – otherwise, a photocopy or PDF file of the article will be required.

In the Discussion section, you will use the information you have drawn from the articles reviewed to present “where the field is at” given the particular problem posed. You are also to articulate current controversies (if there isn’t consensus on the issue), and outline what needs to be known in order to reach agreement on “best practice”. You are also to come up with recommendations for use in practice. Your recommendations should follow from your review of the results – thus, while you must provide an “answer” to your research question, you should also provide limitations to your conclusion, based on methodological flaws in the reviewed literature. Combined, the Results and Discussion sections should be less than 10 pages in length.

4.3 Final Conference Presentation

The final product in this course will be a conference presentation, in which you summarize your question, the research that has been done on the topic, the quality of the results, and your final conclusion. This presentation will be evaluated by one of the course instructors. Hence, it is critical that you provide the instructor with all of the information that is needed to evaluate the evidence for your hypothesis. All conference presentations will be made on March 29th and April 5th. Grading for the assignment will comprise two components: conference proceedings, and the actual oral (poster or lecture) presentation.

4.3.1 Conference Proceedings

The purpose of the conference proceedings is to acquaint you with the process of writing a short synopsis of results (2-3 pages in length, including references) suitable for submission as a brief report to research journals. You will be required to complete a written summary of the literature that describes your chosen topic area and research question, and accurately reflects the published knowledge base on the topic. As with all class assignments, your writing style should follow APA guidelines for both style and format. Conference proceedings will be bound and distributed to all classmates on March 29th. Your proceedings are due on March 22nd at the **beginning of class**—proceedings received after this time will not be marked, and will not be included in the proceedings booklet.

4.3.2 Oral (Poster or Lecture) Presentation

The purpose of the oral conference presentation is to acquaint you with the process of creating a poster or lecture (PowerPoint) presentation suitable for submission to professional conferences. This presentation must adequately reflect the key literature, methodology, question, and findings of your project. You will be required to verbally present your poster or PowerPoint presentation to the instructor and your classmates, during which time you will be required to answer questions about your topic, the results reviewed, and your conclusions.

5.0 POLICY ON CHEATING & ACADEMIC OFFENCES

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: <http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf> .

Plagiarism: Students must write their essays and assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offense (see Scholastic Offense Policy in the Western Academic Calendar).

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

6.0 PROCEDURES FOR APPEALING ACADEMIC EVALUATIONS

In the first instance, all appeals of a grade must be made to one of the course instructors (informal consultation). If the student is not satisfied with the decision of the course instructor, a written appeal must be sent to the School Director. If the response of the department is considered unsatisfactory to the student, he/she may then appeal to the Dean of the Faculty in which the course of program was taken. Only after receiving a final decision from the Dean, may a student appeal to the Senate Review Board Academic. A Guide to Appeals is available from the Ombudsperson's Office.