

FN 9711A - Nutritional Epidemiology

Day/time: Tuesday 3:30-6:30 pm

Room: Grad classroom
Ursuline Hall

Office hours:

Dr J Seabrook – by appointment only

Dr D Battram - by appointment only

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COURSE DESCRIPTION:

This course will provide an introduction to principles of epidemiology as applied to nutrition. Students will learn about study design, conduct, analysis, and interpretation of epidemiologic studies related to nutritional status, diet and disease relationships. Emphasis will be placed on population-level dietary and nutritional status assessment, and the influence of methods and study designs on interpretation of, and conclusions from research.

COURSE OBJECTIVES:

This course provides graduate students in the Master of Science in Foods and Nutrition program with an understanding of the theoretical and practical considerations in the conduct of epidemiologic studies related to diet, nutrition, and chronic diseases.

LEARNING OUTCOMES:

Upon completion of the course, students will be able to:

1. Select the most appropriate dietary intake assessment method for a given research question, epidemiologic study design, and study population;
2. Identify and evaluate the strengths and limitations of dietary intake assessment methods currently available, and understand the implications of the limitations of methods on study results;
3. Evaluate the methods available for assessing physical activity in epidemiologic studies, and identify their major strengths and limitations;
4. Select the most appropriate epidemiologic study design for specific nutrition-related research questions taking into account the strengths and limitations of various designs;
5. Describe the data analysis and interpretation issues of special importance in nutritional epidemiology studies;
6. Interpret data from key local, provincial and national surveillance systems/surveys for program planning/evaluation and advocacy.

APPROACHES:

Lectures, discussions, self-directed learning, literature appraisal/review, seminars and presentations. Active participation in classroom discussion is required.

COURSE/REFERENCE MATERIALS:

Weekly reading assignments - will either be provided by the course directors or students may be required to download material from Web-CT.

ADDITIONAL REFERENCES (available at Brescia's Beryl Ivey library):

1. Gordis L. *Epidemiology*, 4th ed. Saunders Elsevier Inc, Philadelphia, PA. 2009. (highly recommended)
2. Willet W. *Nutritional Epidemiology*, 2nd ed. Oxford University Press, NY 1998.
3. Friis RH and Thomas AS. *Epidemiology for Public Health Practice*, 3rd ed. Aspen Publication, Maryland, 2003.
4. Margetts BM, Nelson M. *Design Concepts in Nutritional Epidemiology*, 2nd ed. Oxford University Press, NY, 1997.
5. Fraser GE. *Diet, Life Expectancy, and Chronic Disease: Studies of Seventh-day Adventists and other Vegetarians*. Oxford University Press, NY, 2003.
6. Koepsell TD, Weiss NS. *Epidemiologic Methods: Studying the Occurrence of Illness*. Oxford University Press, NY, 2003.
7. Rothman KJ, Greenland S, Lash TL. *Modern Epidemiology*, 3rd ed. Lippincott Williams & Wilkins, 2008.
8. Savitz DA. *Interpreting Epidemiologic Evidence: Strategies for Study Design and Analysis*. Oxford University Press, NY, 2003.
9. Streiner DL, Norman GR. *PDQ Epidemiology*, 2nd ed. B.C. Decker, Inc., Hamilton, Ontario, 1998.
10. Szklo M, Nieto FJ. *Epidemiology: Beyond the Basics*, 2nd ed. Jones and Bartlett Publishers, Massachusetts, 2007.

EVALUATION:

- **Assignment 1: Seminar- Presentation of a research article (20%).**

Each student will examine the strength of the relationship between a dietary factor and chronic disease under current investigation, search and evaluate the most recent literature, e.g., published review or meta-analysis, on the topic.

 - Topic must be approved by the instructors, so we do not have two students doing the same topic.
 - The seminar should present the current evidence, the methods used in collecting data and comment on the strength of the diet/disease relationship and the validity of the methods used to determine dietary exposure. The seminar should conclude with a proposed study design for further research to expand our knowledge of this particular diet/disease relationship.
 - The presentation should last for 15 minutes, followed by 3-5 minutes of question and discussion period.
- **Assignment 2: Research paper- A review of the literature (70%).**
 - Each student will conduct a comprehensive review on a topic of their own choosing (different from topic done for Assignment 1). The topic may be related to the student's thesis or research project. Topic must be approved by the instructors, so we do not have two students doing the same topic.

Using published articles retrieved from at least 3 online databases (Cochrane, PubMed, etc.), the student will conduct a literature search and include a minimum of 10 research articles.

- The review should be approximately 10-15 pages (excluding references), with 1 inch margins, 12 pt font, Times Roman. Sub-headings can be used where appropriate. Students are expected to

integrate and synthesize the literature (see published review articles as examples). Reference style is flexible, but you should adhere to 1 style in your paper. **This review is worth 60% of your final mark in the course.**

- The student will also present (10 min) their review in class. This presentation should provide an overview of their review. **This presentation is worth 10% of your final mark in the course.**

▪ **Participation in class discussions (10%)**

Students are expected to actively participate in class discussions, demonstrate that they have read the assigned readings, are prepared to ask questions, and discuss pertinent issues.

COURSE SCHEDULE – Fall 2016

Sept. 13 Seabrook*	Course Overview Introduction to Epidemiological Concepts: <ul style="list-style-type: none"> • Study Design • Causality
Sept. 20	Tutorial on literature searches – Brescia library (Caroline Whippey)
Sept. 27 Seabrook*	Descriptive Epidemiological Research <ul style="list-style-type: none"> • Study Design II • Sample Size • Data Entry Techniques
Oct 4 Seabrook*	Assessing the Methodological Quality of Epidemiological Research
Oct. 11 Seabrook*	Issues associated with outcome selection and assessment Screening for disease: <ul style="list-style-type: none"> • Sensitivity and specificity • Positive and negative predictive values • Likelihood ratios Common Statistical Tests
Oct. 18 Seabrook*	Factors affecting interpretation: <ul style="list-style-type: none"> • P values • Confidence intervals • RRR,ARR,NNT • Statistical vs. clinical significance
Oct. 25 Seabrook/Battram	Assignment #1: Research article presentation (20%)
Nov. 1 Battram*	Dietary Intake Methods for Epidemiological Studies: <ul style="list-style-type: none"> • Food frequency and other methods • Validity and reliability in dietary data collection
Nov. 8 Battram*	Anthropometrics <ul style="list-style-type: none"> • Weight, height and waist circumference- measured versus self-reported • Body composition: bone density, % fat and % lean mass
Nov. 15 Battram*	Physical activity and sedentary behavioral assessment
Nov. 22 Battram*	Biochemical Indicators of Dietary Intake
Nov. 29	Assignment #2: Review papers DUE (60%)

	Please submit hard copy to the registrar's office by 4pm. Independent work on research paper presentation.
Dec. 6 Seabrook/Battram	Assignment #2: Presentation of research papers (10%)

* Lead Professor

2016-17 BRESCIA UNIVERSITY COLLEGE ACADEMIC POLICIES AND REGULATIONS

1. POLICY REGARDING MAKEUP EXAMS AND EXTENSIONS OF DEADLINES

When a student requests academic accommodation (e.g., extension of a deadline, a makeup exam) for work representing 10% or more of the student's overall grade in the course, it is the responsibility of the student to provide acceptable documentation to support a medical or compassionate claim. All such requests for academic accommodation **must** be made through an Academic Advisor and include supporting documentation. Academic accommodation for illness will be granted only if the documentation indicates that the onset, duration and severity of the illness are such that the student could not reasonably be expected to complete her academic responsibilities. Minor ailments typically treated by over-the-counter medications will not normally be accommodated. Documentation shall be submitted as soon as possible to the student's Academic Advisor indicating the period of illness and when the student should be able to resume academic responsibilities. Students must submit their documentation along with a request for relief specifying the nature of the accommodation being requested no later than two business days after the date specified for resuming responsibilities. Appropriate academic accommodation will be determined by the Dean's Office in consultation with the student's instructor(s). Please note that personal commitments (e.g., vacation flight bookings, work schedule) which conflict with a scheduled test, exam or course requirement are **not** grounds for academic accommodation.

A UWO Student Medical Certificate (SMC) is **required** if a student is seeking academic accommodation on medical grounds. This documentation should be obtained at the time of the initial consultation with the physician/nurse practitioner or walk-in clinic. A SMC can be downloaded from: <http://www.westerncalendar.uwo.ca/2016/pg117.html> The student must request documentation sufficient to demonstrate that her ability to meet academic responsibilities was seriously affected. Please note that under University Senate regulations documentation stating simply that the student "was seen for a medical reason" or "was ill" is **not** adequate to support a request for academic accommodation.

Whenever possible, requests for academic accommodation should be initiated in advance of due dates, examination dates, etc. Students must follow up with their professors and Academic Advisor in a timely manner.

The full policy on requesting accommodation due to illness can be viewed at: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf

2. ACADEMIC CONCERNS

If you feel that you have a medical or personal problem that is interfering with your work, contact your instructor and Academic Advisor as soon as possible. Problems may then be documented and possible arrangements to assist you can be discussed at the time of occurrence rather than on a retroactive basis. Retroactive requests for academic accommodation on medical or compassionate grounds may not be considered.

If you think that you are too far behind to catch up or that your work load is not manageable, you should consult an Academic Advisor. If you consider reducing your workload by dropping one or more courses, this must be done by the appropriate deadlines (refer to the Registrar's website, www.registrar.uwo.ca, for official dates). You should consult with the course instructor and the Academic Advisor who can help you consider alternatives to dropping one or more courses. *Note that dropping a course may affect OSAP eligibility and/or Entrance Scholarship eligibility.*

The Dean may refuse permission to write the final examination in a course if the student has failed to maintain satisfactory academic standing throughout the year or for too frequent absence from the class or laboratory (<http://www.westerncalendar.uwo.ca/2016/pg130.html>)

3. ABSENCES

Short Absences: If you miss a class due to a minor illness or other problems, check your course outline for information regarding attendance requirements and make sure you are not missing a test or assignment. Cover any readings and arrange to borrow notes from a classmate. Contact the course instructor if you have any questions.

Extended Absences: If you have an extended absence, you should contact the course instructor and an Academic Advisor. Your course instructor and Academic Advisor can discuss ways for you to catch up on missed work and arrange academic accommodations, if appropriate.

4. POLICY ON CHEATING & ACADEMIC MISCONDUCT

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.westerncalendar.uwo.ca/2016/pg113.html>

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offences. Students are urged to read the section on Scholastic Offences in the Academic Calendar. Note that such offences include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course in the University or elsewhere. Students are advised to consult the section on Academic Misconduct in the Western Academic Calendar.

If you are in doubt about whether what you are doing is inappropriate or not, consult your instructor, the Student Services Centre, or the Registrar. A claim that "you didn't know it was wrong" is not accepted as an excuse.

The penalties for a student guilty of a scholastic offence (including plagiarism) include refusal of a passing grade in the assignment, refusal of a passing grade in the course, suspension from the University, and expulsion from the University.

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 offence (see Scholastic Offence 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.

Computer-marked Tests/exams:

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating. Software currently in use to score computer-marked multiple-choice tests and exams performs a similarity review as part of standard exam analysis.

5. PROCEDURES FOR APPEALING ACADEMIC EVALUATIONS

All appeals of a grade must be directed first to the course instructor. If the student is not satisfied with the decision of the course instructor, a written appeal signed by the student must be sent to the Department Chair. If the response of the department is considered unsatisfactory to the student, she may then submit a signed, written appeal to the Office of the Dean. 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, or you can consult an Academic Advisor. Students are advised to consult the section on Student Academic Appeals under Academic Rights and Responsibilities in the Western Academic Calendar (<http://www.westerncalendar.uwo.ca/2016/pg112.html>)

6. PREREQUISITES AND ANTIREQUISITES

Unless you have either the prerequisites for a course or written special permission from your Dean to enroll in it, you will be removed from the 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 prerequisite(s).

Similarly, you will also be deleted from a class list if you have previously taken an antirequisite course unless this has the approval of the Dean. These decisions may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course because you have taken an antirequisite course.

7. SUPPORT SERVICES

The Brescia University College Registrar's website, with a link to Academic Advisors, is at is at <http://brescia.uwo.ca/academics/registrar-services/> . The website for the Student Development Centre at Western is at <http://www.sdc.uwo.ca/> . Students who are in emotional/mental distress should refer to Mental Health @ Western http://uwo.ca/health/mental_wellbeing/ for information including a complete list of options about how to obtain help.

Portions of this document were taken from the Academic Calendar, the Handbook of Academic and Scholarship Policy and the Academic Handbook of Senate Regulations. This document is a summary of relevant regulations and does not supersede the academic policies and regulations of the Senate of the University of Western Ontario.