Western HealthSciences

Brescia School of Food and Nutritional Sciences

FN 9711: Nutrition Research and Epidemiology
Fall 2026

Campus Supports

Western University is committed to a **thriving campus**. For help with:

- Both physical and mental health, go to Wellness & Wellbeing
- Studying with disabilities, go to Accessible Education
- Writing skills, go to the Writing Support Centre
- Learning skills and strategies, go to Learning Development & Success
- Contacting the ombudsperson, go to the Office of the Ombudsperson

Your graduate office (fnsgrad@uwo.ca) can also **guide you** to available campus resources and/or services.

Important Dates

Term Begins	Classes Begin	Classes End	Exam Period	Term Ends
September 1	September 4	December 9	December 11–22	December 31

September 30, 2026: last day to enrol, declare an audit, or drop a graduate course (without it appearing on the transcript); National Day for Truth and Reconciliation and non-instructional day

October 30, 2026: Last day to withdraw from a graduate course beginning in the fall term without academic penalty. Students who drop after this date will receive an F on their transcript.

Graduate students do not have a reading week, but if there is no class scheduled it can be used for independent study/research.

Contact Information

Course Instructor	Contact Information	Office Hours
Dr. Jamie Seabrook	jseabro2@uwo.ca	By appointment only

Note: Course information including grades, assignment outlines, deadlines, etc. are available via OWL Brightspace. Download the Brightspace Pulse App to stay up-to-date on course communication and enable your notification settings within “Communications” in the top toolbar. Check the website regularly for course announcements. If you need assistance, visit OWL Brightspace Help or contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Calendar Course Description (including prerequisites/anti-requisites):

This course will introduce 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. Students will learn how to enter and analyze their own data and will develop a conceptual understanding of multivariate statistics.

Enrollment in this course is restricted to graduate students in Faculty of Health Sciences, as well as any student that has obtained special permission to enroll in this course from the course instructor as well as the Graduate Chair (or equivalent) from the student's home program. The Request to Enroll Form must be completed and submitted to the home program for enrolment.

Delivery Mode: In-person

Component	Date(s)	Time

My Course Description

This course will introduce 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, study designs, and statistical analysis on the interpretation of, and conclusions from research. Through the use of IBM SPSS Statistics, students will learn how to analyze their own data and will develop an understanding of multivariate statistics.

Learning Outcomes

Upon successful completion of this course, you will be able to:

1. Identify and evaluate the strengths and limitations of currently available dietary intake assessment methods and understand the limitations of methods on study results.
2. Select the most appropriate epidemiologic study design for specific nutrition-related research questions, considering the strengths and limitations of various designs.
3. Describe the data analysis and interpretation of nutritional epidemiology studies.
4. Understand statistical techniques used in nutritional epidemiology.
5. Enter and analyze nutritional epidemiological data using IBM SPSS statistical software.
6. Evaluate the methodological and statistical quality of nutrition-related research.

Course Content and Schedule

Week	Topic	Study material	Evaluations due
September 11	Course Overview		

Week	Topic	Study material	Evaluations due
September 18	Nutritional Epidemiology and Statistics	Lecture slides and assigned journal articles	**DUE: Assignment #1 – Reading reflection**
September 25	Qualitative Research	Lecture slides and assigned journal articles	
October 2	Exclusions, Refusals, and Dropouts	Lecture slides and assigned journal articles	**DUE: Assignment #1 – Reading reflection** **Assignment #2 topics released at the end of class**
October 9	Practical and Clinical Importance	Lecture slides and assigned journal articles	
October 16	Independent Study / No Scheduled Class		**DUE: Assignment #2**
October 23	Inferential statistics – estimation procedures, research questions about one group and two independent groups	Lecture slides and assigned journal articles	**DUE: Assignment #1 – Reading reflection**
October 30	Inferential statistics – research questions about three or more groups and about relationships among variables	Lecture slides and assigned journal articles	
November 6	Multiple Regression	Lecture slides and assigned journal articles	**DUE: Assignment #1 – Reading reflection**
November 13	Logistic Regression	Lecture slides and assigned journal articles	
November 20	Research Articles as assigned – in class discussions: Integration of Nutritional Epidemiology and Statistics	Assigned journal articles	**DUE: Assignment #1 – Reading reflection**
November 27	Research Articles as assigned – in class discussions: Integration of Nutritional Epidemiology and Statistics	Assigned journal articles	**DUE: Assignment #1 – Reading reflection** **Assignment #3 topics released at the end of class**

Week	Topic	Study material	Evaluations due
December 4			**DUE: Assignment #3**

Assessments and Evaluation

Below is the evaluation breakdown for the course. Any deviations will be communicated.

Assessment	Format	Weight	Due Date	Grading Flexibility	Learning Outcome
Participation and Scholarly Engagement		15%	Ongoing	None	1, 2, 3, 4, 6
Critical Appraisal Reflections	Written	30%	Ongoing (see course content and schedule)	None	1, 2, 3, 4, 6
Assignment 2: Qualitative Study Proposal— Group Assignment (Pairs)	Written	20%	October 16	None	2, 3, 6
Assignment 3: Quantitative Study Protocol, Analysis Plan, and Simulated Results— Individual Assignment	Written	35%	December 4	None	2, 3, 4, 5, 6

EVALUATION

Participation and Scholarly Engagement (15%)

Active engagement is an essential component of this graduate course. Students are expected to attend class prepared to discuss assigned readings, contribute thoughtfully to methodological and statistical discussions, and engage critically with research concepts presented throughout the course.

Participation will be evaluated based on the quality and consistency of contributions rather than frequency alone. Meaningful contributions may include:

- critical evaluation of research methods, statistical analyses, and interpretation of findings;
- thoughtful questions or comments that advance discussion;
- integration of concepts across lectures and readings;
- application of methodological or statistical principles to research examples; and

- respectful engagement with peers during discussion-based activities.

Because this course emphasizes discussion, critical appraisal, and integration of research concepts, active scholarly engagement throughout the semester is expected.

Assignment 1: Critical Appraisal Reflections (30%)

Each student will write a reflection of no more than 1.5 pages (single-spaced, 12-point Times New Roman font, 1-inch margins) in Microsoft Word on the readings assigned for each lecture.

The reflection should NOT summarize the articles. Instead, students should critically evaluate the methodological, statistical, and interpretive aspects of the readings while integrating evidence across the assigned articles where appropriate.

Address the following questions:

1. **What methodological feature of the readings most influenced the credibility of the findings, either positively or negatively?**
   Consider study design, measurement approaches, sampling, confounding, bias, or data quality.
2. **How appropriately were the statistical analyses and results interpreted?**
   Discuss whether the conclusions were supported by the data and whether the findings were practically, clinically, or scientifically meaningful.
3. **What broader challenge in conducting or interpreting health research was highlighted by the readings?**
   Examples may include difficulties with causal inference, balancing internal versus external validity, ethical constraints, measurement limitations, or translating findings into practice or policy.
4. **What important questions remain unanswered after completing the readings?**
   Identify gaps in the evidence and explain what additional research, analyses, or methodological approaches would strengthen the literature.

Students should integrate all assigned readings. It is not necessary to address each question separately for each article; however, all questions should be addressed within the reflection using appropriate integration across readings.

Six reflections will be submitted throughout the term and collectively contribute 30% of the final grade.

Submission details will be provided on the course OWL/Brightspace page.

Assignment 2: Qualitative Study Proposal (20%) — Group Assignment (Pairs)

Students will work in pairs to complete a 2–3-page written proposal outlining a qualitative research study based on a selected topic. Topics will be chosen from a list provided by the instructor.

The proposal should include:

- study objectives;
- rationale for the qualitative approach;

- study design;
- study population and sampling procedures;
- data collection methods;
- ethical considerations;
- proposed analytic approach; and
- anticipated strengths and limitations of the study design.

The purpose of this assignment is to provide students with experience designing and justifying a qualitative research study. Evaluation will be based on clarity, feasibility, methodological rigor, and justification of the proposed design. Both members of the group are expected to contribute equally and will receive the same grade.

Additional instructions will be provided on the course OWL/Brightspace page.

Assignment 3: Quantitative Study Protocol, Analysis Plan, and Simulated Results (35%) — Individual Assignment

Students will complete a 4–5-page written assignment outlining a quantitative research study based on a selected topic. Topics will be chosen from a list provided by the instructor.

The assignment should present a complete study protocol and demonstrate how the proposed analysis would be conducted and interpreted.

The submission should include:

- study objectives and hypothesis(es);
- study design;
- study population and sampling procedures;
- variables and levels of measurement;
- data collection methods;
- statistical analysis plan;
- ethical considerations; and
- presentation of expected or simulated results based on the proposed analysis (tables and/or figures only);
- interpretation and discussion of the simulated findings.

The purpose of this assignment is to provide students with experience developing a quantitative research study from conception through analysis and interpretation while applying methodological and statistical principles discussed throughout the course.

Evaluation will be based on clarity, feasibility, methodological rigor, appropriateness of the proposed analyses, coherence of interpretation, and quality of scientific communication.

Additional instructions will be provided on the course OWL/Brightspace page.

General information about assessments:

- ☑ All assignments are due at 23:59 EST unless otherwise specified.
- ☑ Students are responsible for ensuring that the correct file version is uploaded; incorrect submissions including corrupt files could be subject to late penalties (see below) or a 0.
- ☑ Written assignments will be submitted to Turnitin (statement in policies below).
- ☑ Students will have access to Turnitin reports before their submission is graded. Students may have 2 submissions to Turnitin.
- ☑ A student might not receive the same grade as their group members if it is determined that the distribution of work was not equal.
- ☑ After an assessment is returned, students should wait 24 hours to digest feedback before contacting their evaluator; to ensure a timely response, reach out within 7 days.
- ☑ Any grade appeals on term work must be initiated with the instructor within 3 weeks of the grade being posted.

Use of Artificial Intelligence for the Completion of Course Work

The primary purpose of the written assignments in this course is to develop students' abilities to critically evaluate research, formulate research questions, design studies, interpret statistical findings, and communicate scientific ideas independently. These skills represent core learning objectives of the course.

Accordingly, the use of generative artificial intelligence tools (e.g., ChatGPT, Claude, Gemini, Copilot, or similar tools) is not permitted for the completion of any graded assignment in this course, including Critical Appraisal Reflections, the Qualitative Study Proposal, and the Quantitative Study Protocol, Analysis Plan, and Simulated Results assignment.

Students are expected to generate their own ideas, conduct their own analyses, develop their own interpretations, and write all submitted work independently. Submission of work generated wholly or substantially by artificial intelligence may be considered a scholastic offence and may be subject to investigation under University policies governing academic integrity.

Students may use standard tools for spelling and grammar checking (e.g., Microsoft Word Editor or Grammarly's basic proofreading functions), provided that these tools do not generate substantive content, analyses, interpretations, or written responses.

The instructor reserves the right to discuss submitted work with students and to request clarification regarding any aspect of an assignment.

Passing Graduate Level Course

The program may require students to withdraw if they fail to meet the following standards: Students must maintain a cumulative average of at least 70% calculated each term over all courses taken for credit, with no grade less than 60%.

Policy for Accommodation for Late and/or Missed Assignments

In case of missed assessments, a penalty of 10% will be applied for late work without accommodation. Missed assignment more than 7 days late will be assigned a mark of zero without accommodation. In arranging accommodation, instructors will use good judgment and

ensure fair treatment for all students. Students who have been denied accommodation by an instructor may appeal this decision to the Graduate Chair of the Brescia School of Food and Nutritional Sciences (see "Appealing a Grade Within this Course" for details on appeals).

INC (Incomplete Standing)

If a student has been approved by the Academic Advising Office (in consultation with the instructor/department) to complete term work at a later date, an INC will be assigned. Students with INC will have their course load in subsequent terms reduced to allow them to complete outstanding course work. Students may request permission from Academic Advising to carry a full course load for the term the incomplete course work is scheduled.

Academic Policies and Statements

Health and Wellness Services

There are various support services around campus and these include, but are not limited to:

1. Academic Support and Engagement - http://academicsupport.uwo.ca
2. Wellness and Well-being - https://www.uwo.ca/health/
3. Registrar's Office -- http://www.registrar.uwo.ca/
4. Ombuds Office -- http://www.uwo.ca/ombuds/

Students who are in emotional/mental distress should refer to Mental Health Support at https://www.uwo.ca/health/psych/index.html for a complete list of options about how to obtain help.

Statement on Gender-Based and Sexual Violence

Western is committed to reducing incidents of gender-based and sexual violence (GBSV) and providing compassionate support to anyone who is going through or has gone through these traumatic events. If you are experiencing or have experienced GBSV (either recently or in the past), you will find information about support services for survivors, including emergency contacts at Western Wellness's Get Help page.
To connect with a case manager or set up an appointment, please contact support@uwo.ca

Student Code of Conduct

The purpose of the Code of Student Conduct is to define the general standard of conduct expected of students registered at Western University, provide examples of behaviour that constitutes a breach of this standard of conduct, provide examples of sanctions that may be imposed and set out the disciplinary procedures that the University will follow. For more information, visit Western's Code of Student Conduct.

Accommodation for Religious Holidays

Students should review the policy for Accommodation for Religious Holidays. Where a student will be unable to write examinations and term tests due to a conflicting religious holiday, they should inform their instructors as soon as possible but not later than two weeks prior to writing

the examination/term test. In the case of conflict with a midterm test, students should inform their instructor as soon as possible but not later than one week prior to the midterm.

Statement on 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 in the Scholastic Offences document.

Additionally, 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).

Use of Electronic Devices

During Lectures and Tutorials

Although you are welcome to use a computer during lecture and tutorial periods, you are expected to use the computer for scholastic purposes only, and refrain from engaging in any activities that may distract other students from learning. From time to time, your professor may ask the class to turn off all computers, to facilitate learning or discussion of the material presented in a particular class.

Copyright and Intellectual Property

Course material produced by faculty is copyrighted and to reproduce this material for any purposes other than your own educational use contravenes Canadian Copyright Laws. Unless **explicitly** noted otherwise, you may **not** make audio or video recordings of lectures – nor may you edit, re-use, distribute, or re-broadcast any of the material posted to the course website.

Accessible Education Western (AE)

Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program. Please see the Policy on Academic Accommodation for Students with Disabilities for more information.

Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are strongly encouraged to register with Accessible Education (AE), a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both AE and their graduate programs (normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged.

Appealing a Grade Within this Course

You have the right to appeal any grade within this course. The grounds for a grade appeal may

be one or more of: medical or compassionate circumstances, extenuating circumstances beyond the student's control, bias, inaccuracy, or unfairness. All grounds advanced in a request for relief must be supported by a clear and detailed explanation of the reasons for the request together with all supporting documentation. For more details information, a student can consult the Procedure for Graduate Student Requests for Relief.

Appeals generally proceed in this order:

1. Course instructor (informal consultation)
2. Graduate Chair (submission of written request)
3. SGPS (submission of written request)