

# Western HealthSciences

## Brescia School of Food and Nutritional Sciences

### FN 4435B – Food Analysis Winter 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 course coordinator can also **guide you** to available campus resources and/or services.

#### Important Dates

Classes Begin	Reading Week	Classes End	Study day(s)	Exam Period
January 5	February 14-22	April 9	April 10-11	April 12-30

March 30, 2026: Last day to withdraw from a first-term half course without academic penalty

#### Contact Information

Course Coordinator/instructor	Contact Information	Office Hours
Latifeh Ahmadi	lahmadi@uwo.ca	Email – by appointment

Teaching Assistant(s)	Contact Information	Office Hours
TBC		

**NOTE:** All 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):

Promotes understanding of the fundamentals, procedures, and laboratory techniques of physical, chemical and biochemical analyses (qualitative and quantitative) of foods. Emphasis on utilization and/or application in food science, public health, sanitation, foods and nutrition.

**Antirequisite(s):** The former Foods and Nutrition 2350A/B.

**Prerequisite(s):** [Biology 1290B](#). **Pre-or Corequisite(s):** [Foods and Nutrition 3342A/B](#).

*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.*

**NOTE: If you wish to enroll in this course without the stated pre-requisite(s), you must obtain written approval from the course instructor. The approval should then be forwarded to your academic counsellor.**

### **Delivery Mode: In-person**

Component	Date(s)	Time
Lab Section 001		

### **Learning Outcomes**

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

Understand the principles of food analysis by conducting various analytical techniques

1. Learn various physical, chemical, and biochemical analyses of foods.
2. Gain scientific knowledge of food composition.
3. Evaluate and discuss each experimental laboratory result.
4. Be able to discuss and evaluate their experimental data by writing concise laboratory reports and presenting their findings.

### **Course Content and Schedule**

Class/Topic	Date	Description	Assignments and/or Readings Due
<b>1</b>	Jan 8th	Introduction and Lab Safety	
<b>2</b>	Jan 15th	<b><u>I. Introduction to Food Analysis</u></b> <ul style="list-style-type: none"> <li>- Steps in Analysis:</li> <li>- Reliability of an analytical method</li> <li>- Performing the laboratory procedure</li> <li>- Calculating and interpreting the analytical data</li> </ul>	Technical Lab Report
<b>3</b>	Jan 22nd	<b><u>III. Moisture Measurements</u></b> <ul style="list-style-type: none"> <li>- Oven drying</li> <li>- Vacuum Oven drying</li> <li>- Microwave drying</li> </ul>	Technical Lab Report
<b>4</b>	Jan 29th	<b><u>II. Ash Measurements</u></b> <ul style="list-style-type: none"> <li>- Water activity measurement</li> <li>- Ash determination by dry ashing</li> </ul>	Technical Lab Report

5	Feb 5th	<b><u>IV. Crude Fat Measurements</u></b> - Soxhlet	Technical Lab Report
6	Feb 12th	<b><u>V. Nitrogen/Protein Measurements</u></b> - Kjeldahl method	Technical Lab Report
	Feb 19th	Winter-break	-
7	Feb 26th	Determination of protein - Biuret method	Technical Lab Report
8	March 5th	<b><u>VI. Physical Methods in Food Analysis</u></b> - Hydrometer - Specific gravity - Brix - Baume - Pycnometer - Refractometer - Polarimeter - Viscometer	Technical Lab Report
9	March 12th	<b><u>VII. Carbohydrate Analysis</u></b> - Total carbohydrate: phenol-sulfuric acid method - Starch crystals	Technical Lab Report
10	March 19th	<b><u>VIII. Thin-layer Chromatography (Separation of Fat)</u></b>	Technical Lab Report
11	March 26th	Group project Presentation	
12	April 2nd	Group project-Written report	

### Course Materials You Must Acquire and Their Costs

- Lab coat (Cost: TBC)
- Laboratory Manual (Western bookstore) (Cost: TBC)

### Required Course Materials

- Ahmadi, L., 2024. Food Analysis-Laboratory Manual. (Cost: TBC)

### Optional Course Materials

- Food Analysis, 4th Edition. S. Suzanne Nielsen (ed.) 2010. Springer.
- Pearson's Chemical Analysis of Foods, 8th Edition. H. Egan, R.S. Kirk, and R. Sawyer, 1990. Longman Scientific and Technical
- Food Analysis, Theory and Practice, Y. Pomeranz, and C.E. Meloan, 1987. Springer.

## **Assessments and Evaluation**

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

<b>Component</b>	<b>Weight</b>	<b>Date/ Deadline</b>	<b>Learning Outcome</b>
<b>Participation and Lab Performance</b>	11%	Ongoing	1,2,3,4
<b>Lab Reports (9 x 6% Reports)</b>	54%	One week following each lab session	1,2,3,4
<b>Project Outline</b>	5%	Feb 12th	1,2,3,4
<b>Group Project - Presentation</b>	15%	Mar 26th	1,2,3,4
<b>Group Project - Written Report</b>	15%	Apr 2nd	1,2,3,4

### **Notes:**

1. Participation and Lab Performance (11%): Participation is evaluated continuously throughout the course based on preparedness, engagement in discussions, teamwork, and adherence to lab safety protocols. Students are expected to attend and actively participate in all lab sessions. Academic Consideration requests will only be reviewed in cases of extended absences that significantly impact ongoing participation.
2. Lab Reports (54%): Students must submit 9 lab reports, each worth 6%, within one week of the corresponding lab session. Late submissions will be penalized at a rate of 1% per hour beyond the deadline. Students may submit a lab report up to 24 hours late without a penalty if extenuating circumstances arise. No Academic Consideration request is required for this 24-hour extension. Academic Consideration requests may be granted only for circumstances that began before the deadline and extended beyond the 24-hour grace period. Students must not provide medical or compassionate documentation directly to the instructor.
3. Project Outline (5%) and Group Project (Presentation 15%, Written Report 15%): These assessments are critical components of the course and are collectively considered designated assessments. Students must provide documentation for any absence or delay in submission or presentation. Approved Academic Consideration requests for missed deadlines will result in a deferred submission date, or reallocation of grade weight, as determined appropriate. Students must not submit medical or compassionate documentation to the instructor.

### **Oral presentation**

A presentation (approximately 15 minutes in length, followed by 5 minutes of questions and answers, and a discussion, totalling 20 minutes) at the assigned session will facilitate discussion and promote critical thinking among students. The oral presentation includes a title, outline, introduction (including history and term definitions), objective, body (method, results, and gaps in knowledge), discussion, conclusion, suggestions for future work, and acknowledgments.

### **Written report**

The essay includes the title page, abstract, introduction, relevant literature (results and discussion depend on your subjects), current gaps in knowledge, a suggestion for future work, conclusion, and references (12 pages, double-spaced, except references).

## General information about assessments

Laboratory experiments, short lectures, discussions, assigned readings, laboratory reports, and presentations are methods used to obtain practical understanding, skills, and knowledge in food analysis.

- ☒ 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.
- ☒ Prior to the filing of a written request for relief, students must attempt to resolve the concern regarding a mark or grade through informal consultation with the instructor. If the student is dissatisfied with the decision of the instructor or does not receive a decision from the instructor, a written request for relief must be submitted to the Undergraduate Chair of the School offering this course, within three (3) weeks from the date that the mark was issued.

The table below outlines University-wide grade descriptors.

Letter grade	Number grade	Description
A+	90-100	One could scarcely expect better from a student at this level
A	80-89	Superior work which is clearly above average
B	70-79	Good work, meeting all requirements, and eminently satisfactory
C	60-69	Competent work, meeting requirements
D	50-59	Fair work, minimally acceptable
F	below 50	Fail

### **Rounding of Grades** (for example, bumping a 79 to 80%)

This is a practice some students request. The final grade documented is the grade that you have achieved. There is no rounding to the next grade level, or 'giving away' of marks. Please don't ask me to do this for you; the response will be "please review the course outline where this is presented".

### **Information about late or missed assessments:**

- ☒ Assignments are due on the specified date and time. The mark will be reduced by 10% per day on assignments submitted within 7 days of the due time. Assignments submitted after 7 days will not be accepted for marking, unless accompanied by documentation to confirm a personal issue.

### **Course-specific conditions:**

- ☒ Failure to attend at least 75% of laboratories or studios will result in a laboratory or studio grade of "incomplete" in the course. Completing the laboratory/studio will be necessary to receive credit in the course.
- ☒ Participation and lab performance marks will be evaluated based on student attendance in the lab. If a student misses any lab session, he/she will lose a participation grade. The reporting mark will also be calculated, constituting 50% of the total mark.

**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.

**SPC (Special examination):** If a student has been approved by the Academic Advising Office to write a Special Examination and the final exam is the only outstanding course component, an SPC will be assigned. If the class has a makeup exam, the student is expected to write the makeup exam. If the class doesn't have a makeup exam or the student misses the makeup exam for reasons approved by the Academic Advising Office, the student will write the exam the next time the course is offered. Outstanding SPCs will reduce the course load for the term the exam is deferred as outlined in [Types of Examinations](#) policy.

## **Academic Policies and Statements**

### **Support 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/>

The websites for Registrarial Services (<http://www.registrar.uwo.ca>), and the same for affiliated university colleges when appropriate, and any appropriate Student Support Services (including the services provided by the USC listed here: <http://westernusc.ca/services/>) and the Student Development Services, should be provided for easy access.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://www.uwo.ca/health/>) 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 and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at: [https://www.uwo.ca/health/student\\_support/survivor\\_support/get-help.html](https://www.uwo.ca/health/student_support/survivor_support/get-help.html).

### **Statement on Harassment and Discrimination**

Western is committed to providing a learning and working environment that is free of harassment and discrimination. All students, staff, and faculty have a role in this commitment and have a responsibility to ensure and promote a safe and respectful learning and working environment. Relevant policies include Western's [Non-Discrimination/Harassment Policy](#) (M.A.P.P. 1.35) and [Non-Discrimination/Harassment Policy – Administrative Procedures](#) (M.A.P.P. 1.35). Any student, staff, or faculty member who experiences or witnesses' behaviour that may be harassment or discrimination **must report the behaviour** to the Western's [Human Rights Office](#). Harassment and discrimination can be human rights-based, which is also known as EDI-based, (sexism, racism, transphobia, homophobia, islamophobia, xenophobia, antisemitism, and ableism) or non-human rights-based (personal harassment or workplace harassment).

## **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 <https://www.uwo.ca/univsec/pdf/board/code.pdf>

## **Absence from Course Commitments**

Students must familiarize themselves with the Policy on [Academic Consideration – Undergraduate Students in First Entry Programs](#)

Students missing course work for medical, compassionate, or extenuating circumstances can request academic consideration by completing a request at the [central academic consideration portal](#). Students are permitted one academic consideration request per course per term **without** supporting documentation. Note that supporting documentation is **always** required for academic consideration requests for examinations scheduled by the office of the registrar (e.g., December and April exams) and for practical laboratory and performance tests (typically scheduled during the last week of the term).

Students should also note that the instructor may **designate** one assessment per course per term that requires supporting documentation. This designated assessment is described elsewhere in this document. Academic consideration requests may be denied when flexibility in assessment has already been included. Examples of flexibility in assessment include when there are assessments not required for calculation of the final grade (e.g. 8 out of 10 quizzes), when there is flexibility in the submission timeframe (e.g. 72 hour no late penalty period), or when timed assessments (e.g., quizzes) are available over an extended period of time (e.g., when you are given a 72 hour time period to start – and finish – the assessment).

Please note that academic considerations in this course are granted by the academic advisors in your home unit and implemented by the instructor of this course in accordance with information presented in this course syllabus. Supporting documentation for academic considerations for absences due to illness should use the [Student Medical Certificate](#) or, where that is not possible, equivalent documentation by a health care practitioner. If your absence relates to accommodations that are already supported by [Accessible Education](#), please work with your accessible education counsellor regarding your missed course work.

## **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.

## **Special Examinations**

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean of the Faculty in which the student is registered, in consultation with the instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents. To provide an opportunity for students to recover from the circumstances resulting in a Special Examination, the University has implemented Special Examination dates. The Faculty of Health Sciences has set School-specific dates for these Special Examinations. Please speak with your instructor about the date on which the Special Examination for this course will be held.



## **Scholastic Offences**

Scholastic offences are taken seriously and students are directed to read the policy on [Scholastic Discipline for Undergraduate Students](#).

## **Plagiarism**

Student work is expected to be original. Plagiarism is a serious academic offence and could lead to a zero on the assignment in question, a zero in this course, or your expulsion from the university. You are plagiarizing if you insert a phrase, sentence or paragraph taken directly from another author without acknowledging that the work belongs to him/her. Similarly, you are plagiarizing if you paraphrase or summarize another author's ideas without acknowledging that the ideas belong to someone else. All 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 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 Western University and Turnitin.com ([www.turnitin.com](http://www.turnitin.com)).

## **Use of Artificial Intelligence for the Completion of Course Work**

Within this course, you may only use artificial intelligence tools (e.g., "ChatGPT") in ways that are specifically authorized by the course instructor. All submitted work must reflect your own thoughts and independent written work.

## **Re-submission of Previously Graded Material**

Without the explicit written permission of the instructor, you may not submit any academic work for which credit has been obtained previously, or for which credit is being sought, in another course or program of study in the University or elsewhere.

## **Use of Statistical Pattern Recognition on Multiple Choice 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.

## **Accessibility Statement**

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Accessible Education (AE) at 661-2111 x 82147 for any specific question regarding an accommodation or review [The policy on Accommodation for Students with Disabilities](#). If you think you may qualify for ongoing accommodation (e.g. separate room to write exams, flexibility with deadlines, etc.) that will be recognized in all your courses, we encourage you to visit [Accessible Education](#) for more information.

## **Correspondence Statement**

The centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at their official university address is attended to in a timely manner. Students are further expected to attend to announcements presented through Brightspace, and to read emails generated in this way.

## **Use of Electronic Devices**

### **During Exams**

Unless you have medical accommodations that require you to do so, or explicit permission from the instructor of the course, you may not use any electronic devices (e.g., cell phones, tablets, cameras, smart glass, smart watches, or iPods) during ANY tests, quizzes, midterms,



examinations, or other in-class evaluations. **These devices MUST either be left at home or with your belongings at the front of the room. They MUST NOT be at your test/exam desk or in your pocket. Any student found with a prohibited device will be referred for investigation of a Scholastic Offence, per the policy listed above. The typical first-offence penalty for possession of a prohibited device is zero on the test or exam.**

### **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 Audio/Video Recording Statement**

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.

### **Contingency Plan for an In-Person Class Pivoting to 100% Online Learning**

In the event of a situation that requires this course to pivot to online content delivery, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on Brightspace for students to view at their convenience). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

Note that disruptive behaviour of any type during online classes, including inappropriate use of the chat function, is unacceptable. Students found guilty of Zoom-bombing a class or of other serious online offenses may be subject to disciplinary measures under the Code of Student Conduct.

### **Online Proctoring**

Tests and examinations in this course may be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at: <https://remoteproctoring.uwo.ca>.

### **Academic Appeals and Scholastic Offences**

Students can file a **request for relief from academic decisions** if the request is based on one or more grounds listed in the policy. Students can read more about the policy [here](#) and a link to the procedures is listed in the Support Services sections of this document.

Students may **appeal** some academic and scholastic disciplinary decisions by a Dean or their designate, to the Senate Review Board Academic (SRBA). Students can read more about the policy [here](#) and a link to the procedures is listed in the Support Services section of this document.