

**FOOD 1001 [0.5 credit]
INTRODUCTION TO FOOD SCIENCE**

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Class time Monday and Wednesday, 13:05 - 14:25 pm

Location Tory Building 208

Modality in person synchronous

Lectures 3 hours a week

Preclusions none

Prerequisites none

Text Book No assigned text book. Material relevant to the course will be posted on Brightspace.

Contact:

Email the teaching assistant or instructor with questions at any time and we will respond as soon as possible. Email to make an appointment (in person or online). Pop by the instructor's office (420 Steacie) for an informal discussion. If my door is open I am generally available.

Course Description

Overview of the food industry. Production, processing, product development, packaging, chemistry, analysis, microbiology. Elements risk assessment, policy making and regulation.

General Communication with the Class

Brightspace will be the primary method of electronic communication with students outside of class. It will be used to post lecture slides, assignments, readings and grades. Students should visit the Brightspace regularly.

Learning Outcomes

1. Describe the composition of food and explain its biological, chemical and physical relationship to food quality and safety
2. Explain principles, practices, and recent advancements in food production, processing, and preservation
3. Analyze theoretical concepts presented in lectures by applying analytical and creative thinking skills in analysis of food related issues, problems, and situations
4. Solve cases involving the processing and preservation of food products by applying chemical, biological, and engineering principles
5. Reflect on your learning and articulate your knowledge, skills, abilities, and competencies

Evaluation*

Test 1	20%
Test 2	25%
Test 3	25%
Written Assignment	20%
cuPortfolio	10%

*notes:

1. you must complete each evaluation to pass the class
2. the evaluation scheme will not be changed

Tests Examinations

Two non-cumulative tests (tests 1-2) will be given. They will consist of multiple-choice and short answer questions. You will have a lecture period (80 minutes) to complete. *You must write each test to pass the course.*

Final Test

The final test is non-cumulative and will take place during the final examination period (90 minutes). It will consist of multiple-choice and short answer questions. *You must write each test to pass the course.*

cuPortfolio: The purpose of this assignment is to challenge you to become more aware of your own learning and development as a Food Science student. As such, the reflection prompts are directly connected to the Food Science program-level learning outcomes. In this evaluation, you will be asked to reflect on your learning experiences in FOOD 1001 and begin to consider your academic, professional, and intellectual development throughout the Food Science program.

- **Why reflect?** Reflection requires you to think critically about your learning. It is not enough to simply achieve the learning outcomes for the program – the true value of your education lies in your ability to *recognize, articulate, and synthesize* what you have learned so that you can *apply* your learning post-graduation.
- **What is an artifact?** You will also be asked to select pieces of evidence (artifacts) that demonstrate your developing competency in specific program learning outcomes and describe why these pieces best represent your knowledge, skills, abilities, and/or learning.
- **But I'm a non-major. Why do I have to do this?** Many of the skills you will develop and experiences you will have in this course are transferrable to other courses and areas of study. If you are a non-major taking this course, this assignment will be an opportunity for you to purposefully consider what it is you will take from this course and how you might apply what you have learned in future studies.

Written Assignment: a description and a rubric will be provided at a later date

Tentative Schedule

DATE	DAY	Topic
Jan 8	M	Introduction to the course
Jan 10	W	Food Science and Industry
Jan 15	M	Food Categories and Composition
Jan 17	W	Food Chemistry – Carbohydrates
Jan 22	M	Food Chemistry – Lipids
Jan 24	W	Food Chemistry – Proteins
Jan 29	M	Food Chemistry I – Color, Flavor, Texture
Jan 31	W	Food Chemistry I – Color, Flavor, Texture
Feb 5	M	Review Lecture
Feb 7	W	Test 1
Feb 12	M	Food Processing – Basic Principles
Feb 14	W	Food Processing – Basic Principles
Feb 19	M	Winter Break
Feb 21	W	Winter Break
Feb 26	M	Food Processing – Animal Products
Feb 28	W	Food Processing – Plant Products
Mar 4	M	Food Microbiology – Food Spoilage and Fermentation
Mar 6	W	Food Microbiology – Food Spoilage and Fermentation
Mar 11	M	Review Lecture
Mar 13	W	Test 2
Mar 18	M	Food Safety – Microbial hazards
Mar 20	W	Food safety – Chemical hazards
Mar 25	M	Sensory Evaluation and Product Development
Mar 27	W	Food Regulations and Laws
Apr 1	M	Food Biotechnology
Apr 3	W	cuPortfolio explanation (exact date tbd)
Apr 8	M	Review lecture (Written assignment due)
Apr 10	W	Catch up day if needed (cuPortfolio due)

Missing Exams

If you miss a test you must notify the instructor within 24 hours after the date of the test. A make-up exam will be permitted under two conditions only: illness or bereavement. A document is required to schedule an alternative time for the midterm. If no documentation is provided, you will receive a grade of zero. *Please note all tests and assignments must be completed to pass the course.*

Late Assignment

Late assignments will lose 10% per day. An assignment can no longer be submitted 9 days following its initial deadline. *The assignment must be completed to pass the course.*

Feeling Sick?

If you feel very sick (e.g., fever, chills, stomach upset) do not come to class or campus. Contact the instructor if you are going to miss class.

Mental Health

If you are struggling, please do not hesitate to reach out. I am happy to listen, and/or direct you to resources that might help. In terms of class, if you need extra help or missed a lesson, don't stress! Email me and we will set a time to meet. I'll work with you, I promise. Remember that Carleton also offers an array of mental health and well-being resources, which can be found [here](#).

University Policies

In accordance with the Carleton University Undergraduate Calendar Regulations, the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
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A = 85-89	B = 73-76	C = 63-66	D = 53-56
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A- = 80-84	B- = 70-72	C- = 60-62	D- = 50-52
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F = <50

WDN = Withdrawn from the course

DEF = Deferred

The 2023-2024 Academic Year- <https://calendar.carleton.ca/academicyear/#fall2023>

Academic Accommodations, Regulations, Plagiarism, Etc.

Carleton University is committed to providing access to the educational experience in order to promote academic accessibility for all individuals.

Academic accommodation refers to educational practices, systems and support mechanisms designed to accommodate diversity and difference. The purpose of accommodation is to enable students to perform the essential requirements of their academic programs. At no time does academic accommodation undermine or compromise the learning objectives that are established by the academic authorities of the University. More information can be found at: <https://students.carleton.ca/course-outline/>

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<https://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. For more details, visit the [Paul Menton Centre website](#).

Addressing Human Rights Concerns

The University and all members of the University community share responsibility for ensuring that the University's educational, work and living environments are free from discrimination and harassment. Should you have concerns about harassment or discrimination relating to your age, ancestry, citizenship, colour, creed (religion), disability, ethnic origin, family status, gender expression, gender identity, marital status, place of origin, race, sex (including pregnancy), or sexual orientation, please contact the [Department of Equity and Inclusive Communities](#) at equity@carleton.ca.

Religious Obligations

Please contact me with requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, please review the [Student Guide to Academic Accommodation \(PDF, 2.1 MB\)](#).

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are

supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: <https://carleton.ca/sexual-violence-support/>

Accommodations for Missed Work

Carleton recognizes that students may experience unexpected, temporary incapacitation (i.e., illness, injury, or extraordinary circumstances outside of a student's control). As a result, Carleton has put into place a protocol for students to apply for accommodations using a self-declaration form in the event of missed work. The form can be found at: <https://carleton.ca/registrar/wp-content/uploads/self-declaration.pdf>

Note that these forms should be used for short-term concerns related to missed work; if you are experiencing chronic, ongoing challenges which necessitate a broader solution, I recommend reaching out to the Paul Menton Centre and/or the Care Support team.

For Pregnancy

Please contact me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, please review the [Student Guide to Academic Accommodation \(PDF, 2.1 MB\)](#).

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, see the [Senate Policy on Accommodation for Student Activities \(PDF, 25KB\)](#).

Academic Integrity

Academic Integrity is upholding the values of honesty, trust, respect, fairness, responsibility, and courage that are fundamental to the educational experience. Carleton University provides supports such as academic integrity workshops to ensure, as far as possible, that all students understand the norms and standards of academic integrity that we expect you to uphold. Your teaching team has a responsibility to ensure that their application of the Academic Integrity Policy upholds the university's collective commitments to fairness, equity, and integrity. Adapted from [Carleton University's Academic Integrity Policy](#), 2021).

Examples of actions that do not adhere to Carleton's Academic Integrity Policy include:

- Plagiarism
- Accessing unauthorized sites for assignments or tests
- Unauthorized collaboration on assignment and exams
- Using artificial intelligence tools such as ChatGPT when your assessment instructions say that it is not permitted

Please review the checklist [linked here](#) to ensure you understand your responsibilities as a student with respect to academic integrity and this course.

Sanctions for Not Abiding by Carleton's Academic Integrity Policy

A student who has not upheld their responsibilities under Carleton's Academic Integrity Policy may be subject to one of several sanctions. A list of standard sanctions in science can be found [here](#).

Additional details about this process can be found on [the Faculty of Science Academic Integrity website](#). Students are expected to familiarize themselves with and follow the Carleton University [Student Academic Integrity Policy](#). The Policy is strictly enforced and is binding on all students.

Student Rights & Responsibilities

Students are expected to act responsibly and engage respectfully with other students and members of the Carleton and the broader community. See the [7 Rights and Responsibilities Policy](#) for details regarding the expectations of non-academic behavior of students. Those who participate with another student in the commission of an infraction of this Policy will also be held liable for their actions.

Student Concerns

If a concern arises regarding this course, your first point of contact is me. Email to schedule an appointment or pop by my office and I will do my best to address your concern(s). If I am unable to address your concern, the next points of contact in order are the chemistry undergraduate chair (Dr. David Brock), the chemistry department Chair (Dr. Sean Barry) and the Office of the Dean of Science (ODScience@carleton.ca). Note: You can bring your concerns to Ombuds services.

Assistance for Students

Academic and Career Development Services: <http://carleton.ca/sacds/>

Writing Services: <http://www.carleton.ca/csas/writing-services/>

Peer Assisted Study Sessions (PASS): <https://carleton.ca/csas/group-support/pass/>

Math Tutorial Centre: <https://carleton.ca/math/math-tutorial-centre/>

Science Student Success Centre: <https://sssc.carleton.ca/>