2025 Winter Term
Time: Wednesdays 1 pm to 4 pm

Course Instructor: Dr. Joan Jory | **Email**: joan.jory@utoronto.ca

Land Acknowledgment
"*We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land*" (Source)

Course Description
The course introduces the basic concepts of toxicology and illustrates their application in the context of food and nutrition. Emphasis will be placed on understanding the occurrence, mechanism of action, safety and health implications of chemicals naturally present in or added to foods. This course will also provide the fundamentals of toxicogenomic and discuss the interaction between toxic substances, nutrients, human genetics and the gut microbiota, in the context of health and diseases. Food safety evaluation and regulatory control information will be presented.

Prerequisites
BCH210H1, NFS284H1

Learning Objectives
By the end of this course, the students will be able to:

- Define basic scientific terminology and describe core concepts in toxicology as they apply to nutrition and the food supply.
- Identify and describe different sources of toxicity in the food supply and discuss their potential effects on health.
- Critically evaluate findings from the scientific literature on a specific, potentially toxic substance found in the food supply.
- Understand regulatory issues related to food and nutritional toxicology

Teaching Assistant
Sabrina Ayoub-Charette | Email: sabrina.ayoubcharette@mail.utoronto.ca

Course Materials
No textbook is required for this course. Materials and readings will be posted on Quercus.

Office Hours
In-person: Wednesdays from 11 am to 12 pm. Room TBD.
Online: via ZOOM by appointment.
Dr Jory is also available during class breaks, and after class. Consultations are welcome, and highly encouraged. Please email Dr Jory to arrange a virtual or in-person meeting. Emails to Dr. Jory should have a brief explanation in the subject line, and **must come from a @utoronto.ca email account.**

Course Communication

All the Announcements will be made on the course website (Quercus). The Announcements will contain information important to student success in NFS488. It is the **student's responsibility** to **remain up-to-date with the Announcements** and to activate the course notifications.

The course website includes a discussion board for students to ask questions related to lecture material and general course content. If you have a **question about course material,** please **post it in the Discussion Board** for the benefit of everyone. **Email** should be used **for questions related to personal matters** or marks.

Course Overview and Assessment - Course Schedule **

Date	Lecture Topic
Week 1 (Jan. 8)	**Lecture 1:** Basic Concepts of Nutritional Toxicology
Week 2 (Jan. 15)	**Lecture 2:** Chemicals in foods: Natural Toxins and Toxicants Seminar: Group Project, Research Paper and Presentation
Week 3 (Jan. 22)	**Lecture 3:** Toxicological Studies in Nutrition Guest Lecture – Applications in Toxicology: Artificial Sweeteners and Toxicity
Week 4 (Jan. 29)	**Lecture 4:** Dietary Reference Intakes, Toxicity, Food Safety and Regulations Group Research Question due
Week 5 (Feb. 5)	**TERM TEST #1**: Open-book
Week 6 (Feb. 12)	**Lecture 5:** Host Genetic Variability and Toxicogenomics Gene-food toxicant interactions Group Project Outline due online
Week 7 (Feb. 19)	**Reading week – No class**
Week 8 (Feb 26)	**Lecture 6:** Guest Lecture – Applications of Toxicology: Mercury, POPs and First Nations peoples
Week 9 (Mar. 5)	**Lecture 7:** Toxicomicrobiomics: The Gut Microbiota, Dietary, and Xenobiotics interactions
Week 10 (Mar. 12)	**Lecture 8**: Drug-nutrient interactions and genetic susceptibility Group Research Paper due – online
Week 11 (Mar. 19)	**TERM TEST #2**: Open-book
Week 12 (Mar. 26)	All group slides **must** be submitted by 8 am. In-class group presentations (Day 1)
Week 13 (Apr. 2)	In-class group presentations (Day 2)

**** The order of the lecture schedule may be subject to change - students will receive advanced notice of any change to the lecture schedule. ****

Assessment Distribution

Assessment	Weight	Date
Research question	2%	January 29
Term Test 1: **(Open Book)**	26%	February 5
Group Project Outline	3%	February 12
Group Research Paper	20%	March 12
Term Test 2: **(Open Book)**	26%	March 19
Group Oral Presentation	15%	March 26, April 2
Group Assessment Participation	6%	March 26, April 2
Course engagement	2%	January 8 to April 2
Total	100%	

Term tests: (52% of course grade). There will be two-term tests, each counting for 26% of the course grade. Each term test will include only material covered up to and including the week before the test.

Group project: (40% of course grade). There will be one project per group. A detailed description of the entire group assignment will be posting in the Announcements, along with the marking rubrics. Students will be placed into groups of 2-3, and will be assigned a topic of a food-related substance with potentially toxic properties. The objective of the project is for the groups to synthesize scientific literature and apply concepts of toxicology to critically evaluate the potential hazards of the substance.

Participation: (6% of course grade). Participation during the March 26 (3%) and April 2 (3%) group presentations will be evaluated. To earn the participation grade, each student will be required to evaluate each group presentation, indicating strengths and areas for improvement. Attendance at the time of the oral presentations is mandatory.

Course engagement: (2% of course grade). This includes participation in course activities either in class or online, discussion of the course content, attendance, and completion of the course surveys.

Plagiarism detection tool (PDT)

"Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation website (https://uoft.me/pdt-faq)"

A link for the submission of assignments to PDT will be available on Quercus. If you have problems that prevent you from submitting to PDT, please contact Dr Jory to discuss alternatives. All students are expected to either submit to PDT, which is voluntary, or provide an alternative. Failure to do so could result in a grade of ZERO for the assignment. For those who do not submit to PDT, as an alternative you will be expected to meet with Dr. Jory for a short oral test during which you will be asked questions about the writing of the assignment and its content. Your assignment grade may be changed based on how well you answer these questions. Dr. Jory and/or the teaching assistants review the PDT submissions and will e-mail students if there are any concerns about their writing.

Missed Term Tests and Late Work

Missed term tests: There are **no make-up tests** for missed tests. If a student misses a term test, they will receive a **grade of 0 unless** an acceptable **explanation** that is **backed up with documentation** is presented. If the documentation is approved, the overall grade of the missed test will be redistributed among the remaining assessments in the manner that Dr Jory decides.

Late submission of either the group project outline or the written report will result in a deduction from the total course grade for each day it is late, up to the assignment's total worth. A **10% deduction per day** will be applied.

Missed presentation: If a group member misses their group's presentation, they will receive a grade of 0 for the presentation unless an acceptable reason exists (that is backed up with documentation), in which case their overall grade will be redistributed among the remaining assessments according to Dr Jory.

Required Documentation for Missed Work:

Medical concern: A justified medical excuse, with the University of Toronto Verification of Student Illness or Injury form completed by a health care provider. These forms are available from the following website: http://www.illnessverification.utoronto.ca/
Personal distress. A written or verbal explanation to the instructor is required. All discussions with the instructor will be confidential. Students dealing with intense or ongoing personal distress or chronic illness, who may need special and continuing accommodation, may be asked for additional documentation and are advised to discuss their situation with their college registrar.

Please note that poor time management, having several assignments due at the same time, having to study for term tests, etc are NOT reasons for an extension. Students are expected to complete their assignments as best they can, hand them in on time, even if incomplete, and accept that they may not get as high a grade as they would like.

The instructor is dedicated to working with you to help you achieve the best learning experience during this course, however, last-minute (i.e. the night before tests or deadlines for assignments) responses to requests cannot be promised. Work and study ahead of deadlines so the instructor can be of most assistance to you.

Regrade Policy

The students will have **one week from** the date that the **grade is posted** to **appeal** their marks. If the students would like to contest a mark, they must submit a written proposal by email to Dr. Jory explaining why a re-grade is warranted. The instructor may or may not choose to re-grade, it will depend on how well each student presents their case. The instructor reserves the right to re-read and re-grade the entire work. Be aware that the mark may go up, down, or stay the same.

Copyright and sharing permissions

Lecture videos, tutorials, and any other course material belong to the instructor, the University, and/or other source depending on the specific facts of each situation, and are protected by copyright. In this course, the students are permitted to download session videos and materials for their academic use, but they should not copy, share, or use them for any other purpose without the explicit permission of the instructor.

Accessibility Needs

The University of Toronto is committed to accessibility. If you require accommodations for a disability or have any accessibility concerns about the course, the classroom, or course materials, please **contact Accessibility Services as soon as possible** at accessibility.services@utoronto.ca or http://www.studentlife.utoronto.ca/as