
NFS488H1S*Course Syllabus*

**Nutritional Toxicology Winter 2018
MS 2172, Wednesdays, 1:10-4:00pm****COURSE DESCRIPTION:**

The purpose of this course is to introduce students to the basic principles of nutritional toxicology and discuss issues related to the safety of the Canadian food supply. The course will deal with toxicants found in the food supply, including additives and naturally occurring substances, bacterial contaminants, allergens and compounds produced during food processing and storage. Emphasis will be placed on understanding research study design and applying this knowledge to the discussion and evaluation of findings from peer-reviewed nutritional toxicology studies.

Pre-requisites:

- Introductory university-level courses in human nutrition and biochemistry or permission of the instructor.

BROAD COURSE GOALS:

- To introduce basic principles of toxicology and illustrate their application in the context of food and nutrition.
- To examine different types of study designs and to discuss how these methods can be applied to studying the effects of toxicants in the food supply on health.
- To critically evaluate the findings of nutritional toxicology studies and understand why conflicting evidence may exist.

COURSE OBJECTIVES

At the end of this course students will be able to:

- Define basic scientific terminology and describe core concepts in toxicology as they apply to nutrition and the food supply.
- Distinguish between different types of research study designs and explain some advantages and disadvantages of specific methodological approaches.
- 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.

COURSE COMMUNICATIONS:

The course website is available through the Blackboard Portal page.

- Class announcements will be made on the course website.
- Lecture slides will be posted online by 9am on the day of the lecture.
- 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 here for the benefit of everyone. Individual queries to the instructor about marks or personal matters should be immediately after class, or by e-mail.

CLASSES AND INFORMATION

Lectures: Wednesday, 1-4 pm in MS 2172

Instructor: **Christopher Villa, PhD, MEd, MSc**

email: christopher.villa@mail.utoronto.ca

office hours: immediately after each lecture or by appointment

Teaching Assistants: **Shoug Alashmali**
email: shoug.alashmali@mail.utoronto.ca

Lorena Lopez
email: l.lopezdominguez@mail.utoronto.ca

MATERIALS

There are no required or recommended textbooks. Material will be provided during the term and posted on blackboard in "Course materials".

COURSE OUTLINE

Week 1: January 10	Introduction to Nutritional Toxicology
Week 2: January 17	Toxicity Tests Overview of course assignment
Week 3: January 24	Food Allergies & Intolerances
Week 4: January 31	Scientific Evidence & DRIs
Week 5: February 7	TERM TEST #1
Week 6: February 14	Natural Toxins & Repair Mechanisms GROUP PROJECT OUTLINE DUE
Week 7: February 21	READING WEEK – NO CLASS
Week 8: February 28	Diet & Health
Week 9: March 7	Food Safety
Week 10: March 14	Biotechnology & the Food Supply
Week 11: March 21	TERM TEST #2
Week 12: March 28	ALL GROUP SLIDES AND WRITTEN REPORTS DUE IN-CLASS GROUP PRESENTATIONS
Week 13: April 4	IN-CLASS GROUP PRESENTATIONS

EVALUATION

The course will contain the following evaluations:

Assessment	Weight	Date
Term Test 1	25%	February 7
Group Project Outline	5%	February 14
Term Test 2	25%	March 21
Group Presentation	19%	March 28, April 4 (*Slides from all groups due March 28*)
Participation	1%	March 28, April 4
Group Written Report	25%	March 28

Term tests: (50% of course grade)

There will be two term tests, each counting for 25% of the course grade. The format of the tests will be closed book. Each term test will include material covered up to the previous week. Questions will be in short and long-answer form. There will be NO multiple choice or true/false-type questions. **The term tests will take place on February 7 and March 21, during class from 1:10pm-3pm.**

Group project: (50% of course grade)

A detailed description of the entire group assignment will be announced in class on January 17 along with the marking rubrics. Students will be placed into groups of 4-6 and will be assigned a topic of a food-related substance with potentially toxic properties. The goal of the project is for groups to synthesize scientific literature and apply concepts of toxicology to critically evaluate the potential hazards of the substance. The project consists of 3 components: an outline, an oral presentation, and a written report.

Outline: (5% of course grade). The outline will briefly describe the proposed hazards of the substance, the toxicology concepts that will be applied, and the types of scientific studies to be evaluated. **The outline will be submitted at the beginning of class on February 14 (ONLY ONE COPY per group is required).** Outlines submitted by e-mail will not be accepted.

Group Oral Presentation: (19% of course grade)

Groups will discuss the evidence they have evaluated along with their application of toxicology concepts, and present their conclusions about their assigned substance. All group members will be expected to speak. A maximum of 12 minutes will be allotted, with an additional 3 minutes for questions from the audience (15 minutes total). **Presentations will take place on March 28 and April 4, but all slides must be submitted to the instructor at the beginning of class on March 28.** The instructor will assign presentation dates.

Participation: (1% of course grade)

During the March 28 and April 4 group presentations, student attendance will be evaluated through the submission of peer-evaluations.

Group Written Report: (25% of course grade)

A hard copy written report that accompanies the oral presentation is **due from all groups on March 28.** The report may be up to 12 pages in length (double spaced, size 12 font, 1-inch margins) excluding Tables, Figures and References. There will be a 10% reduction in the mark per day for late reports. For writing assistance, students may wish to use the resources at the University of Toronto Academic Writing Centre (Woodsworth College, Room 214):

http://www.wdw.utoronto.ca/index.php/current_students/academic_writing_centre/.

Course assignments must represent original work. Plagiarism is a serious academic offense and it will be penalized with a failing grade.

"Normally, students will be required to submit their course assignments to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their assignments to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site".

Submission of the outline and the written report through Turnitin is voluntary, but students who choose not to use Turnitin will be required to meet with the instructor for an oral test where they will be asked questions about their preparation of the assignment and their knowledge of its subject matter. More information on how to submit work through Turnitin will be provided in class and on Blackboard, along with the detailed description of the overall course assignment, on January 17.

Students are encouraged to contact the instructor with questions or concerns early in the process of preparing their assignments. More information on what is considered plagiarism at the University of Toronto, and how to avoid it, is available from the following websites:

<http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>

http://www.utoronto.ca/academicintegrity/Academic_integrity.pdf

Attendance, missed term tests and late work

Attendance is not mandatory. However, most students will find attendance of lectures to be helpful, as in-depth discussion of the lecture slides and assignments will occur in class. Students who do not attend the group presentations at the end of the course will not receive marks toward the participation grade.

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. In this case, the overall grade will be redistributed among the remaining assessments.

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 5% deduction per day will be applied to late outlines and written reports.

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.

Required documentation for missed work:

- A justified medical excuse, with 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** compelling 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) response to requests cannot be promised. Work and study ahead of deadlines so the instructor can be of most assistance to you.

Re-reading of assignments:

In the event that you would like to contest a mark on an assignment, the instructor will perform a formal re-read of your work after you submit your concerns to him, clearly outlined in writing (*i.e.* via e-mail or as a written submission handed in in class). Be aware that your mark may go up, down, or stay the same. The instructor reserves the right to re-read and re-grade your entire assignment, not just the answer that you have challenged.