

**NFS 1225: Nutrition Metabolism for Public Health Nutrition Professionals**  
**January 11 to April 8, 2016**  
**Online Course**

**Course Description**

In this course, we review the metabolism of macronutrients, and we apply our understanding of nutrition metabolism to current public health nutrition issues. By strengthening your scientific literacy and your professional skills in facilitation, collaboration and communication this course will contribute to your development as a public health nutrition professional.

**Learning Outcomes**

By the end of this course, you will be able to:

1. Organize concepts in nutrition, biochemistry, molecular biology and human physiology into a holistic view of human metabolism
2. Recognize the biological mechanisms underpinning nutrition recommendations and practices, related to health maintenance and chronic disease prevention.
3. Interpret research data and critically appraise primary research literature
4. Apply findings from research literature to public health nutrition issues, and actively engage in discussions on these issues
5. Facilitate a thoughtful, substantive on-line discussion on one aspect of metabolism and public health practice
6. Explore a current controversy in public health nutrition and defend a position clearly and concisely.

**Course website**

This course is delivered online on Blackboard and will be available as a link on your Portal page on January 6, 2016. Please register for the course before then, to ensure that your access to the course is not delayed.

**Instructor**

Laurie Ricciuto, PhD, RD [laurie.ricciuto@utoronto.ca](mailto:laurie.ricciuto@utoronto.ca)

Office Hours: Mondays, 10:00am - 1:00 pm, Fitzgerald Building Room 141. If you are not available during office hours, please email me and we can arrange an appointment.

**Course Structure**

This course is segmented into eight modules on topics related to nutrition and metabolism. Within each module, you will learn and develop skills through independent, self-paced activities and collaborative online discussions with your peers.

**Course Schedule**

Module Dates	Module Topics	Discussion Opens	Discussion Closes
Jan 11-19	Metabolism and Public Health Nutrition: Making the Connection	Jan 13	Jan 19
Jan 20-28	Carbohydrate Metabolism	Jan 22	Jan 28
Jan 29-Feb 8	Lipid Metabolism	Feb 2	Feb 8
Feb 9 - 24	Food Intake Regulation	Feb 11	Feb 24
Feb 12	Assignment Outline Due		
Feb 15-19	Reading Week		
Feb 25 - Mar 3	Nutrigenetics: Diet and Genetic Variations	Feb 27	Mar 3
Mar 4- 15	Obesity and Diabetes	Mar 8	Mar 15
Mar 16 -29	Obesity, Cardiovascular Disease and Dietary Fat	Mar 21	Mar 29
Mar 30 - Apr 7	Obesity, Physical Activity and Cancer	Apr 1	Apr 7
Apr 15	Assignment Due		

## Course Elements

**A. Independent reading and reflection** – For each module, there will be powerpoint slides and/or a video recording that cover a particular aspect of nutrition metabolism. The teaching content is drawn from our current knowledge base of nutrition metabolism (i.e., textbooks) and incorporates findings from primary research literature. You will be responsible for reading these materials (slides and research articles), reflecting on and organizing the concepts in order to strengthen and update your knowledge and understanding of nutrition metabolism.

**B. Facilitation and active participation in online discussions** – This is the collaborative component of the course in which you engage with the content and with your peers, in order to apply the knowledge from A) to public health nutrition practice. Most discussions will be led and facilitated by students, with some direction from the Instructor. To help ensure meaningful and manageable discussions, the class will be divided into smaller discussion groups. Each of you will facilitate one module discussion among a small discussion group. The rest of you will be active and engaged discussion participants for that module. The

goal is to work together to create a dynamic discussion on a particular topic that lasts throughout the duration of the module.

Discussion facilitators are expected to:

- Submit initial post within two days of module being active (i.e., when discussion opens)
- Respond to all peer responses in a timely manner throughout the duration of the session
- Create and post a summary of the discussion (300 words) at the end of the session

Discussion participants are expected to:

- Submit initial post within two to three days of module being active
- Submit at least two peer responses by end of session

More specific guidelines and resources for online discussions can be found on Blackboard.

### Professional Writing in the 'Virtual Classroom'

The online discussion forum, 'Virtual Classroom', is considered an educational setting; a place for scholarly discussion and interaction. Since one of the goals of this forum is to develop your effective writing skills, it is important for you to follow the acceptable writing conventions of spelling, grammar and punctuation in all your posts. If you want to give some personal expression to your ideas, you need to cultivate this in your writing style. Emoticons and chat abbreviations you use in social forums are not considered appropriate in a professional, academic context.

**C. Major Assignment** - Your major assignment in this course is to create a briefing note on an emerging nutrition issue or current controversy; it must be relevant to some aspect of nutrition metabolism. Briefing notes are often used in government settings in order to effectively inform or advise decision-makers on emerging issues. In business settings, 'issues management' documents (similar to briefing notes) are prepared by nutrition professionals in order to inform and advise senior management on issues relevant to the business.

You will be provided with a list of options from which you can choose a topic. The intended audience for your briefing note will be a senior-level decision-maker in a public or private sector setting. There are three main components to this assignment:

**Assignment Outline** - Two to three bullet points, in which you identify: 1) The issue and intended audience; 2) The relevant metabolic pathways/biological mechanism; and, 3) Two to three references that will inform your briefing note.

**Briefing Note** - You are not expected to do an exhaustive search of the literature; the emphasis in this assignment is on the synthesis and positioning of the issue. It is best to limit yourself to two to three key articles, and use these to inform your positioning. Take some time to reflect on

the content and to discuss the issue with your peers before you formulate your own position. Maximum length is two pages.

**Attachment to Briefing Note** - This will contain a one-page background document, plus a list of the references you used to inform your briefing note. In this background document, you need to describe the biological mechanism/metabolic pathways relevant to the issue you are covering. The main purpose of this background document is to demonstrate your knowledge and understanding of course material and how it applies to public health practice.

More specific guidelines and resources for the assignment can be found on Blackboard.

## Assessments

	Percentage of Final Grade		Due Date
<b>On-line Discussions</b>	Facilitate one module discussion* (20%)	Contribute to six other discussions (5% $\times$ 6 modules= 30%)	On-going (see 'Course Schedule')
<b>Assignment Outline</b>		5%	February 12, 2016
<b>Assignment</b>		45%	April 15, 2016

\* Your date to facilitate a discussion will be assigned in the first week.

Specific assessment criteria for discussions and the major assignment can be found in the '**How You are Marked**' section on Blackboard.

## Resources

Required readings for each module will be posted on Blackboard. You will also find other helpful resources posted in the '**Student Toolkit**' section on Blackboard.

There is no specific textbook required for this course. If you wish to refer to a textbook, any of the four listed below are recommended.

### Recommended Textbooks:

1. Bender D. 2014. Introduction to Nutrition and Metabolism. 5th edition. CRC Press.
2. Frayn KN. 2010. Metabolic Regulation: A human perspective. 3rd edition. Wiley-Blackwell. <http://go.utlib.ca/cat/7993199>
3. Gropper SS and Smith JL. 2013. Advanced Nutrition and Human Metabolism. 6th ed. Wadsworth Cengage Learning.
4. Ross AC, Caballero B, Cousins RJ, Tucker KL, Ziegler TR. 2013. Modern nutrition in health and disease. 11<sup>th</sup> edition. Lippincott, Williams and Wilkins. <http://go.utlib.ca/cat/9013108>

**Recommended Websites:**

PubMed - <http://www.ncbi.nlm.nih.gov/pubmed>

Public Health Agency of Canada. Canadian Best Practices Portal - <http://cbpp-pcpe.phac-aspc.gc.ca/resources/public-health-competencies-information-tools/assessment-analysis/>

National Academies Press, DRI reports - <http://www.nap.edu/search/?term=DRI+reports>

**Writing Support:**

Writing assistance is available to graduate students at The School of Graduate Studies, English Language and Writing Support Centre (ELWS). Refer to - <https://www.sgs.utoronto.ca/currentstudents/Pages/English-Language-and-Writing-Support.aspx>

**Research Help:**

University of Toronto Libraries provides access to a vast collection of online and print resources, as well as guidance and support on research and learning. Refer to - <https://onsearch.library.utoronto.ca/services>

**Course Expectations**

Participation: You are expected to participate fully in the course. You are encouraged to contact the course instructor as early as possible, should you have any questions or concerns about meeting course expectations.

Assignment: If the assignment is submitted late, you will be penalized 1% per day of the assignment's final mark. Permission to extend the due date for medical or other compelling grounds may be granted if discussed with course instructor in advance.

**University of Toronto Policies**

Academic Integrity: Academic integrity is essential to the pursuit of learning and scholarship in a university. The University of Toronto's Code of Behaviour on Academic Matters outlines the behaviours that constitute academic misconduct. Plagiarism (the presentation or paraphrasing of another person's work as if it was one's own) is a form of academic fraud with potentially serious consequences. All university policies regarding plagiarism will be upheld in this course. Refer to - <http://academicintegrity.utoronto.ca/>

Students in graduate studies are expected to commit to the highest standards of integrity. The instructor reserves the right to submit student papers to <http://turnitin.com/>, a computer-based service which checks for originality in submitted papers.

Accessibility: The University provides support and accommodations for students with disabilities to ensure equitable access to opportunities and achievement of students' full potential. Refer to - <http://www.studentlife.utoronto.ca/as>