CHEM181x Food for Thought

Course Description

Eating has become a complicated and often confusing experience. Virtually every day brings news about some "miracle food" that we should be consuming or some "poison" we should be avoiding. One day it's tomatoes to prevent cancer, then flaxseed against heart disease or soybeans for reducing menopause symptoms. At the same time we may be warned about trans fats, genetically modified foods, aspartame or MSG. Dietary supplements may be touted as the key to health or a factor in morbidity. According to some, dairy products are indispensable while others urge us to avoid them. The same goes for meat, wheat and soy; the list goes on. This course will shed light on the molecules that constitute our macro and micro nutrients and will attempt to clarify a number of the food issues using the best evidence available.

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

- 1) Identify the main nutritional components of their diet.
- 2) Explain some of the issues surrounding food production and health.
- 3) Assess the strengths and weaknesses of food related research that is commonly presented in the media.

Instructors

Ariel Fenster

Associate Director of the Office for Science and Society McGill University

David N. Harpp

Sir William Macdonald Professor of Chemistry McGill University

Joe Schwarcz

Director of the Office for Science and Society McGill University

Teaching Assistants

Alexander Steeves-Fuentes

McGill University

Angela Guadagno

McGill University



Course Schedule

Week	Release Date	Topics	Due date*
Introduction to F	ood for Thought		
Welcome	January 22	Meet the Instructors	
Week 1:	January 22	Lesson 1: A Sampling of Food Topics	
Introduction		Lesson 2: Perspectives – Health, History, Science & Society	
		Lesson 3: Scientific Research and Publishing	
		Assignment #1	April 30
Unit 1: Nutrition	Basics	•	
Week 2:	January 29	Lesson 1: Vitamins I	
Micronutrients		Lesson 2: Vitamins II	
Vitamins		Assignment #2	February 14
Week 3:	February 5	Lesson 1: Minerals I	
Micronutrients		Lesson 2: Minerals II	
Minerals	l	Lesson 3: Minerals III	
		Assignment #3	February 21
Week 4:	February 12	Lesson 1: Carbohydrates	
Macronutrients		Lesson 2: Sugar	
		Lesson 3: Fats	
		Lesson 4: Protein	
		Assignment #4	February 28
	February 19	Unit 1 Test	March 11
Unit 2: Food Prod	luction – Techniq	ues, Issues & Health Impacts	
Week 5:	February 19	Lesson 1: Agricultural Science I	
Agriculture	•	Lesson 2: Agricultural Science II	
		Assignment #5	March 7
Week 6:	February 26	Lesson 1: Food Additives I	
Food Additives	•	Lesson 2: Food Additives II	
		Lesson 3: Sweeteners	
		Assignment #6	March 14
Week 7:	March 05	Lesson 1: Adverse Food Reactions I	
Adverse Food		Lesson 2: Adverse Food Reactions II	
Reactions		Lesson 3: Cooking Demo	
		Assignment #7	March 21
	March 12	Unit 2 Test	April 1
Unit 3: Food and			<u> </u>
Week 8:	March 12	Lesson 1: Chocolate	
Weight Control		Lesson 2: Weight Control I	
		Lesson 3: Weight Control II	
		Assignment #8	March 28
Week 9:	March 19	Lesson 1: Diet & Cancer	
Diet & Disease		Lesson 2: Diet & the Heart I	
		Lesson 3: Diet & the Heart II	
		Assignment #9	April 4
Week 10:	March 26	Lesson 1: The Health Food Business	
Wrap-up		Lesson 2: Wine	
		Lesson 3: Cheese	
		Lesson 4: Sense and Nonsense	
		Assignment #10	April 11
	April 2	Unit 3 Test	April 23

^{*} All assignments and tests are due at 23h30 UTC



Assignments

This course has 10 assignments that will be posted every Wednesday along with the lesson materials. If you have any questions about an assignment we encourage you to post them on the discussion forum so that other students can provide input along with the teaching assistants and professors. With the exception of Assignment #1 which is due the last day of the course, you will have a minimum of two weeks to complete assignments. When calculating your final grade, your lowest two assignment scores will be dropped.

Unit Discussions

CHEM181x: Food for Thought is divided into three units that are each comprised of 3 weeks of lectures. At the beginning of each unit you will be assigned readings and a prompting question around which a multi-week discussion will be structured.

Over the course of the unit, the professors and teaching assistants will share their thoughts and identify themes coming out of the discussion threads. We encourage you to use the 'up vote' tool to flag posts that you find particularly interesting.

Discussion and collaboration guidelines can be found here.

Note: It is important for you to be involved in the discussion forum. Up to 3 questions on the main ideas/themes of the unit discussions will be included on the Unit 3 Test.

Grading

8 Assignments x 5 points (your two lowest scores will be dropped)	40%
3 Unit Tests (all required, 20% per test)	60%

Certificate of Completion

To obtain a certificate of completion, a final grade of 60% or higher needs to be achieved. EdX will issue and send the certificate under the name of McGillX via email after the end of the course. The certificate will not include a final grade.

