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| Welcome to ENVS2130DE – Eating Sustainably in Ontario! I am very happy that you decided to take this course and I’m looking forward to spending the semester with you. Food sustainability is a very interesting subject but it is also very broad and complex. There are many ways to examine food sustainability and in this course we are going to focus primarily on the environmental impacts of food. The goal of this course is to give you some important background information about how your food is produced. We will then examine the environmental sustainability of food production and, finally, we will consider some important food sustainability issues. I hope that this course challenges your assumptions about food sustainability and I hope that you will approach the material with an open, yet critical, mind.  I’m really looking forward to exploring these topics with you and I hope you enjoy the course! | | |
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| My name is Dr. Kim Bolton. I grew up in Fort Erie, Ontario but have made Guelph my home since coming here in 1982 to begin my undergraduate degree in Soil Science (yes, I am an Aggie!). I completed my Ph.D. (also at the University of Guelph) in 1993 in Soil Chemistry. From 1994 to 1999 I was on faculty in the Department of Environmental Sciences at the University of Toronto at Scarborough. In 1999 I moved back to Guelph and since then I have shifted my interest from research to teaching. Over the past 16 years I have taught many different environmental sciences courses and I also teach two online courses for the Chemistry Department.  I love teaching! I have over 20 years of experience, both in the class and online, and my students often comment on my enthusiasm. I want you to know that I really care about your learning and I will work very hard to help you successfully complete the course. I will guide you through each step of the course with the same enthusiasm and commitment as I give to my in-class courses.  There will be lots of opportunity for you to interact with me and with your classmates. In fact I am "obsessive" about reading and responding to on-line messages so I am confident that you will feel "connected" to me and to each other.  In my spare time, I enjoy cooking, reading, running/cycling, yoga and canoeing/kayaking. On Saturday mornings you can always find me at the Guelph Farmer’s Market. ☺ I love to spend time with my family and my little dog, Niko.  I am really looking forward to getting to know you! Please do not hesitate to contact me with questions/concerns/problems.  P.S. Feel free to call me Kim but if you are uncomfortable with this, Dr. Bolton is fine too!  **Communicating with Your Instructor**  **Phone Number:** 519-824-4120, ext. 52695  **Email:** [kbolton@uoguelph.ca](mailto:kbolton@uoguelph.ca)  **Office Hours (if applicable):** I do not have regular office hours. If you would like to see me, make an appointment via email. | | |
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| This course is intended to introduce students to the science behind food related issues within the context of Canada agriculture and food systems. The course will provide students with an overview of agriculture in Canada and an opportunity to discuss both sides of current debates over food production and associated environmental and human health issues. The course will examine questions such as:  How is our food produced? What is sustainability?  How do we assess the sustainability of our food system? | | |
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| Upon successful completion of this course, you will be able to:  Evaluate methods of food production and outline which methods are more sustainable.  Describe critically the broader environmental impacts of individual and societal food choices.  Analyze the assumptions and evaluate the worth of evidence used by the popular media. Reflect on your own food choices in the context of eating sustainably.  Engage critically and in a scholarly manner, in public arguments about food sustainability issues.  In the process we will address several of the University Learning Outcomes: ULO1 - Critical and Creative Thinking; ULO2 – Literacy; ULO3 - Global Understanding; and ULO4 - Communicating. | | |
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| This course is divided into nine units. Each unit covers either a one- or a two-week timespan (indicated in brackets).  Unit 01: Food and Agriculture in Canada (1 week)  Unit 02: Essential Ingredients: Requirements for Crop Growth (2 weeks) Unit 03: Fire Up the Grill: Animal Protein Production (1 week)  Unit 04: Impacts of Conventional Agriculture (2 weeks) Unit 05: Agricultural Sustainability (2 weeks)  Unit 06: Organic Agriculture (1 week)  Unit 07: Food Waste and Local Food (1 week) Unit 08: Sustainable Seafood (1 week)  Unit 09: Vegetarianism: The Path to Sustainability? (1 week)  During the first 3 Units of the course, we will learn about conventional food production – both crops and livestock. In Unit 04, we will examine the negative environmental impacts that this type of production has had on our land, water and atmosphere. We will then take a look at the concept of sustainability (particularly environmental sustainability) as it pertains to food production. Finally, during the last 4 Units, we will investigate some specific food sustainability issues: organic agriculture, food waste, local food, sustainable seafood and vegetarianism. | | |
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| **Evaluation Overview** | |
| **Assignment** | **Weight** |
| Unit Quizzes | 15% |
| The Omnivore’s Dilemma Online Book Club (Graded Online Discussion) | 10% |
| Independent Blog Reflections | 15% |
| Food Diary Assignment | 10% |
| Analysis of a Meal Assignment | 20% |
| Final Exam | 30% |
| **Total** | **100%** |

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| Your grade in this course will be evaluated as shown in the following table.  For further information about the assignments, click the **Assignments** link in the top navigation bar. You are advised to submit your discussion postings and assignments by the due dates specified. You will find information about the due dates in the **Schedule** by clicking the **Schedule** link in the top navigation bar**.** Late penalty for assignments is 10% per day late (calculated on the total assignment grade).  **Grades and Feedback** | | |

Grades will be posted to the **Grades** link, located in the top navigation bar.

In general your marks will be based on the University of [Guelph undergraduate grading](http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-grds-proc.shtml) [breakdown](http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-grds-proc.shtml) as indicated on the University website.

\* For specific grading criteria, review the expectations for each assignment under the

**Assignments** link located in the top navigation bar.

# **Getting your Grades**

Unofficial assignment marks will be available in the **Grades** section of the course website. Feedback on assignments will be returned online via the **Dropbox** link located in the top navigation bar of the course website.

**Final Examination:** In keeping with the university’s Undergraduate Degree Regulations and Procedures the final examination will be 2 hours long and in sit-down format. It will cover material from the entire course.

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| Throughout the course, you will encounter a variety of different learning tools. The course uses several different approaches to satisfy different learning styles. Each Unit will contain most of the following tools:  Assigned Unit Readings  Videos (You Tube, Ted Talks, etc…)  Instructor Narrated Videos – the first 5 Units contain videos of narrated PowerPoint slides. I made these videos in order to explain some of the concepts in more detail.  Un-graded interactive learning activities  For some units, you will be assigned online readings. These readings will add to, and complement, what you are learning online. The online content will primarily consist of videos explaining concepts and teaching activities designed to increase your learning.  Many of the Units contain **ungraded interactive learning activities**. These activities are designed to engage you directly with the material. This engagement will deepen your understanding of the subject and give you a chance to test your understanding without having the pressure of grades. The ungraded activities include multiple choice (and true/false) questions and matching exercises and they are structured in such a way as to give you immediate feedback.  **Graded Activities/Assignments:**  Detailed information about these graded activities/assignments can be found by clicking the  **Assignments** link in the top navigation bar.  **Online Quizzes:** To keep you on track with the course content, each Unit ends with an online quiz. These quizzes cover the content contained within the Unit (online content, readings, and videos). They are designed to help build your knowledge and prepare you for the final exam. You will have no time limit on the quiz so that you have enough time to engage with the material and think about the answers.  **The Omnivore’s Dilemma Book Club (Online Discussion):** You will be divided into small book club discussion groups. Specific chapters of the textbook will be assigned each week and you will be responsible for discussing the readings (just like in a book club!). This book will enhance your understanding of many of the topics we will cover in the course and your discussion will help you to critically evaluate these topics.  **Independent Blog Reflection:** In several of the Units (03, 04, 05, 06, 07, 09) you will be asked to write a short (250 word) blog on a particular topic or question. These blog entries will help you to reflect on some of the more controversial ideas presented in this course. Your completed blog will be graded at the end of the semester. | | |

**Food Diary Assignment:** Early in the course you will be asked to keep a food diary for one week and to write a short piece on what you eat and why.

**Analysis of a Meal Assignment:** Later on in the course you will be asked to evaluate the sustainability of a meal from your food diary.

I hope the design of this course provides you with a good learning experience.

# **Tips For Success**

This course online website acts as your classroom. The online course allows for flexibility in accessing the content, managing your learning, and communicating with your instructor and classmates. It provides you the opportunity to do your work at any location and whenever you have the time.

On a regular basis, your instructor will update you with necessary information through the **News**

on the Course Home page.

You should start by navigating through all the course components to become comfortable with the organization of the course and familiar with the course expectations. However, if this is your first time taking an online course, quickly go to the **Start Here** link in the navigation bar (NavBar) so that you will get familiar with various content areas and tools available on this course website.

Thereafter, you should navigate through:

the **Schedule** page to see the timeline for the course along with due dates

the **Assignments** page to identify and understand requirements for the various evaluation elements for this course

the **Units,** which wil**l** guide you through the course the **Resources** page

If you encounter any technical difficulty of any kind, you should contact your instructor and the help facility provided by Open Learning.

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| Course discussions provide you with the opportunity to ask questions, share thoughts and to interact with your classmates, your TA and with your professor. It is recommended that you ***check these discussions at least three times a week***, but you can post questions as often as you want.  **Graded Discussion:**  You will be required to participate in a graded online Book Club to discuss, in small groups, the book, “The Omnivore’s Dilemma” by Michael Pollen. These small groups discussions are set up to connect you with other students enrolled in this course, and allow you to share views and receive feedback from other students. This will allow you to build your knowledge and improve your academic performance. You will gain access to the **Book Club Discussion** area for your group by clicking on the **Book Club** link in the top navigation bar.  Use the **“Book Club Introductions”** to introduce yourself to your group members during the first week of classes.  **Ungraded Discussions:**  Use the "**Ask your Professor**" forum to ask general questions about the course, such as course structure, clarification about assignments, problems with links, etc. Please check and post to this forum before you send an email to your professor. Only send an email to your professor if your question is too personal for the forum. This forum will be checked daily by your Instructor and/or TA.  Use the "**Discuss the Content**" forum to post questions about the material covered in a given unit, terms you don't understand, concepts you're having trouble with or that are unclear, etc. Try to help each other out in this forum. You will learn a topic in more depth if you explain it to someone else. This forum will be checked regularly by your instructor and/or TA, but we will only interfere and answer if necessary.  Use the “**Feedback**” forum to tell us about your experience with the course.  It is important for an online course to create a strong community. Posting in the discussion forums is your chance to create such a community. Having a good online community will increase your learning experience. | | |
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| The required textbook for this course is:  **Title:** The Omnivore’s Dilemma: A Natural History of Four Meals  **Author:** Michael Pollan **Publication Date:** 2006 **Publisher:** Penguin Press  You can purchase a copy of the book at the university bookstore (while supplies last). [University of Guelph Bookstore](http://www.bookstore.uoguelph.ca/)  [Co-op Bookstore](http://www.guelphcampus.coop/) | | |
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| **Problems, Questions, Comments** | | |
| **Instructor** | | |
| Kim Bolton | | |
| [kbolton@uoguelph.ca](mailto:kbolton@uoguelph.ca) | | |
| **TA** | | |
| Jessica Singh | | |
| [jsingh16@uoguelph.ca](mailto:jsingh16@uoguelph.ca) | | |
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Unit 01: Food and Agriculture in Canada

# Dates Readings, Activities, Assignments and Due Dates

**Week 1**

**Thursday, September 8**

**to Sunday,**

**September 18**

**Activity Checklist**

Read the **Outline** and **Assignments** so you are clear about course expectations and evaluation

Work through the **online content of Unit 01** (watch videos, do the readings, engage with learning activities)

Introduction

Concept 1.1: What do we eat and where does it come from? Concept 1.2: Brief History of Agriculture

Summary

Familiarize yourself with the **Food Diary Assignment** and start working on it Familiarize yourself with the **Omnivore’s Dilemma Book Club Assignment** and introduce yourself to your group members.

# Required Readings

Statistics Canada (2009). Section 1 (Food in Canada) in Human Activity and the Environment: Annual Statistics (pages 11 to 37)

The Omnivore’s Dilemma Book Club Readings: Chapters 1 & 2

# Graded Activity Checklist

Complete the Unit 01 Online Quiz

**Due:** 11.59pm (EST), Sunday, September 18

Unit 02: Essential Ingredients: Requirements for Crop Growth

# Dates Readings, Activities, Assignments and Due Dates

**Weeks 2 & 3**

**Monday, September 19**

**to Sunday, October**

**2**

**Activity Checklist**

Work through the **online content of Unit 02** (watch videos, do the readings, engage with learning activities)

Introduction

Concept 2.1: The Soil

Concept 2.2: Seedbed Preparation Concept 2.3: Nutrient Management Concept 2.4: Water Management Concept 2.5: Pest Management Summary

Continue to work on the **Food Diary Assignment**

# Required Readings

No Unit readings

The Omnivore’s Dilemma Book Club Readings: Chapters 3, 4, & 5

# Graded Activity Checklist

Complete the **Unit 02 Online quiz**

Participate in **The Omnivore’s Dilemma Book Club Discussion** (on chapters 1 through 5)

**Due:** 11.59pm (EST), Sunday, October 2

Unit 03: Fire Up the Grill: Animal Protein Production

# Dates Readings, Activities, Assignments and Due Dates

**Week 04**

**Monday, October 3**

**to Sunday, October**

**9**

**Activity Checklist**

Work through the **online content of Unit 03** (watch videos, do the readings, engage with learning activities)

Introduction

Concept 3.1: Where’s the Beef? Concept 3.2: Got Milk?

Concept 3.3: Which Came First? Concept 3.4: Bringing Home the Bacon Concept 3.5: Something’s a Little Fishy Summary

Continue to work on the **Food Diary Assignment**

Familiarize yourself with the **Independent Blog Reflection Assignment**

# Required Readings

No Unit readings

The Omnivore’s Dilemma Book Club Readings**:** Chapters 6 & 7

# Graded Activity Checklist

Complete the **Unit 03 Online quiz Due:** 11:59pm (EST), Sunday, October 9

Complete your first **Independent Blog Reflection Due:** 11:59pm (EST), Tuesday, October 11 (week 5)

Unit 04: Impacts of Conventional Agriculture

# Dates Readings, Activities, Assignments and Due Dates

**Weeks 5 & 6**

**Monday, October 10**

**to Sunday, October**

**23**

**Activity Checklist**

Work through the **online content of Unit 04** (watch videos, do the readings, engage with learning activities)

Introduction

Concept 4.1: Our Land Concept 4.2: Our Water Concept 4.3: Our Atmosphere Summary

Familiarize yourself with the **Analysis of a Meal Assignment** and start working on it

# Required Readings

Gomiero, T., Pimentel, D., Paoletti, M. G. (2011). Is There a Need for a More Sustainable Agriculture? (Read only pages 8 to 12)

Bryan, W. (2013). The Triple Whopper Environmental Impact of Global Meat Production

Gilbert, N. (2012). One-third of our greenhouse gas emissions come from agriculture

The Omnivore’s Dilemma Book Club Readings: Chapters 8 & 9

# Graded Activity Checklist

Submit the **Food Diary Assignment Due:** 11.59pm (EST), Monday, October 17 Complete the **Unit 04 Online quiz**

**Due:** 11.59pm (EST), Sunday, October 23 Complete the **Independent Blog Reflection**

**Due:** 11.59pm (EST), Tuesday, October 25 (week 7)

Participate in **The Omnivore’s Dilemma Book Club Discussion** (on chapters 6 through 9)

**Due:** 11.59pm (EST), Sunday, October 23

Unit 05: Agricultural Sustainability

# Dates Readings, Activities, Assignments and Due Dates

**Week 7 & 8**

**Monday, October 24**

**to Sunday,**

**November 6**

**(40th Class Day Friday, November 4)**

# Activity Checklist

Work through the **online content of Unit 05** (watch videos, do the readings, engage with learning activities)

Introduction

Concept 5.1: Agricultural Sustainability: What is it? Concept 5.2: Can Sustainability be Measured?

Concept 5.3: Steps Towards Sustainability Concept 5.4: Evaluating the Evidence Summary

Continue to work on the **Analysis of a Meal Assignment**

# Required Readings

Pretty, J. (2008). Agricultural sustainability: concepts, principles and evidence, (pages 451 to 455; sections 2, 3, 4 and 5)

The Omnivore’s Dilemma Book Club Readings: Chapter 10

# Graded Activity Checklist

Complete the **Unit 05 Online quiz**

**Due:** 11.59pm (EST), Sunday, November 6 Complete the **Independent Blog Reflection**

**Due:** 11.59pm (EST), Tuesday, November 8 (week 9)

Participate in **The Omnivore’s Dilemma Book Club Discussion** (on chapter 10)

**Due:** 11.59pm (EST), Sunday, November 6

Unit 06: Organic Agriculture

# Dates Readings, Activities, Assignments and Due Dates

**Week 9**

**Monday, November 7**

**to Sunday,**

**Activity Checklist**

Work through the **online content of Unit 06** (watch videos, do the readings, engage with learning activities)

Introduction

Concept 6.1: What is Organic Agriculture?

Concept 6.2: Is Organic Agriculture more Sustainable? Summary

# Required Readings/Listening

Martin, H. (2009). Introduction to Organic Farming

Greene, A (n.d). Top 10 Reasons to Support Organic in the 21st Century Wilcox, C. (July, 2011). Mythbusting 101: Organic Farming > Conventional Agriculture

Carrington, D., & Arnett, G. (July, 2014). Clear differences between organic and non-organic food, study finds

McGill University (April, 2012). New study sheds light on debate over organic vs. conventional agriculture

Yang, S. (2014). Can organic crops compete with industrial agriculture? Granatstein, D. (3-13). Organic farming, environmental benefit, yield cost?

Intelligence2 Debates – Organic Food is Marketing Hype (listen to the edited radio broadcast)

The Omnivore’s Dilemma Book Club Readings: Chapter 11

# Graded Activity Checklist

Complete the **Unit 06 Online quiz**

**Due:** 11.59pm (EST), Sunday, November 13 Complete the **Independent Blog Reflection**

**Due:** 11.59pm (EST), Tuesday, November 15 (week 10)

Unit 07: Food Waste and Local Food

# Dates Readings, Activities, Assignments and Due Dates

**Week 10**

**Monday, November 14**

**to Sunday,**

**November 20**

**Activity Checklist**

Work through the **online content of Unit 07** (watch videos, do the readings, engage with learning activities)

Introduction

Concept 7.1: Food Waste

Concept 7.2: Local Food: Is it more Sustainable? Summary

Continue to work on the **Analysis of a Meal Assignment**

# Required Readings/Listening

Gustavsson, J., Cederberg, C., & Sonesson, U. (2011). Global Food Losses and Food Waste (Section 4: Causes and Prevention of Food Losses and Waste) Evans, P. (2014). Food Waste costs Canada $31B a year, report says

NRDC (n.d). Wasted: How America Is Losing Up to 40 Percent of Its Food from Farm to Fork to Landfill

Lipinski, B. (2013). 10 Ways to Cut Global Food Loss and Waste

Meidad Kissinger (2012). International trade related food miles – The case of Canada. *Food Policy,* 37(2), 171–178

Sarah DeWeerdt (2013). Is Local Food Better? *World Watch Magazine*, 22(3). Mark Kenny (2014). A campus food revolution at the University of Guelph.

*Edible Toronto,* 30-32.

Food Fight: Al Mussell - Want to save the planet? Skip the farmer's market! (listen to the edited radio broadcast)

The Omnivore’s Dilemma Book Club Readings: Chapter 12

# Graded Activity Checklist

**Due:** 11.59pm (EST), Sunday, November 20 Complete the **Independent Blog Reflection**

**Due:** 11.59pm (EST), Tuesday, November 22 (week 11)

Participate in **The Omnivore’s Dilemma Book Club Discussion** (on chapters 11 & 12)

**Due:** 11.59pm (EST), Sunday, November 20

Unit 08: **Sustainable Seafood**

# Dates Readings, Activities, Assignments and Due Dates

**Week 11**

**Monday, November 21**

**to Sunday,**

**November 27**

**Activity Checklist**

Work through the **online content of Unit 08** (watch videos, do the readings, engage with learning activities)

Introduction

Concept 8.1: Sustainable Wild Caught Fish Concept 8.2: Sustainable Aquaculture Concept 8.3: What does David Suzuki Say? Summary

# Required Readings/Listening

Fuller, S. D. et. al (2008). How We Fish Matters: Addressing the Ecological Impacts of Canadian Fishing Gear - (pages 4 to 15)

Bourne, J. K. (n.d). How to Farm a Better Fish

Ocean Wise (n.d). Fishing Techniques (watch all the videos) Ocean Wise (n.d). Aquaculture Techniques (watch all the videos) The Omnivore’s Dilemma Book Club Readings: Chapter 13

# Graded Activity Checklist

Complete the **Unit 08 Online quiz**

**Due:** 11.59pm (EST), Sunday, November 27 Wrap up Your **Analysis of a Meal Assignment**

**Due:** 11.59pm (EST), Monday, November 28 (week 12)

# Unit 09: Vegetarianism: The path to sustainability?

**Dates Readings, Activities, Assignments and Due Dates**

**Week 12**

**Monday, November 28**

**to Friday,**

**December 2**

**Activity Checklist**

Work through the **online content of Unit 09** (watch videos, do the readings, engage with learning activities)

Introduction

Concept 9.1: Vegetarianism and the Environment Concept 9.2: The Ethics of Vegetarianism Summary

# Required Readings/Listening

EBSCO Host (n.d). An overview of vegetarianism

World Society for the Protection of Animals (n .d). Eating our Future: The environmental impact of industrial animal agriculture (Read Sections 1, 2 and 3, pages 6 – 19)

Tamar Haspel (2014). Vegetarian or omnivore: the environmental implications

Katherine Martinko (2014). More of us need to become “weekday vegetarians” Animal Welfare Institute (2015). Eat Humanely

Intelligence2 Debates – Don’t Eat Anything with a Face (listen to the edited radio broadcast)

# The Omnivore’s Dilemma Book Club Readings: Chapter 14

**Graded Activity Checklist**

Submit the **Analysis of a Meal Assignment Due:** 11.59pm (EST), Monday, November 28 Complete the **Unit 09 Online quiz**

**Due:** 11.59pm (EST), Friday, December 2 Complete the **Independent Blog Reflection Due:** 11.59pm (EST), Friday, December 2

Participate in **The Omnivore’s Dilemma Book Club Discussion** (on chapters 13 & 14)

**Due:** 11.59pm (EST), Friday, December 2

Final Examination Period

# Dates Readings, Activities, Assignments and Due Dates

**Monday, December 5**

**to Friday,**

**December 16**

Site available for review and examination preparation. Refer to your exam schedule for examination date.