NUTR 238 -- Economics for Food Policy AnalysisSyllabus for Spring 2015

Class Time: T-Th 8:45-10:15 am in Sackler room 507

Instructor: Will Masters **Office:** Jaharis 140

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Weekly review: Thursdays 1:30-3:00 in Jaharis 133

and stop by rm 140, email or call for individual meetings at other times.

TAs: Megan Mueller (M.Mueller@tufts.edu)

Ashley McCarthy (Ashley.McCarthy@tufts.edu)

Office Hours: Fridays 12:15-1:15 in Jaharis 133 or email for individual appointments.

Tufts Credit: 1 credit (3 classroom hours per week over 15 weeks) **Prerequisites:** Graduate standing, or permission of the instructor.

Course Description

This course equips students with the principles used in economics for food policy analysis. We use the graphical methods taught in standard, one-semester courses on the principles of economics, but our motivation, examples and applications are focused on food and nutrition problems in the United States and around the world.

Course Objectives

NUTR 238 helps students explain, predict and evaluate the social outcomes of individual choices using economics principles. Students gain familiarity with the data sources and analytical methods needed to: (1) explain and predict consumption, production and trade in agriculture and food markets; (2) evaluate the social welfare consequences of market failure, collective action and government policies including regulation, taxation and enforcement of property rights in agriculture and food markets; (3) measure poverty and inequality in income, wealth, nutrition and health, as influenced by changes in markets and policies; and (4) describe macroeconomic relationships, fluctuations and trends in incomes, employment, economic growth and development.

Texts and Materials

The required textbook for this course is Paul Krugman and Robin Wells, *Economics* (Worth Publishers, 2nd ed., 2009). Used copies are widely available online, with updated pricing listed here: www.allbookstores.com/book/compare/0716771586. The updated 3rd edition may be used instead, but is not needed.

Additional material specific to this course will be distributed via Trunk. Students looking for a text applying economic principles to food policy might use *Food Policy Analysis* by Timmer, Falcon and Pearson, which is now available freely online, at: www.stanford.edu/group/FRI/indonesia/documents/foodpolicy/fronttoc.fm.html.

Assignments and Grading

For most students, this will be your first course in economics. Each classroom lecture and discussion session is supported by textbook chapters which explain economic principles in more detail. Course slides and lecture videos are also available to review after class. A series of eleven weekly assignments are designed to help you practice economic skills, while the midterm and final exams ask you to use those skills to solve typical questions encountered in food policy analysis. The first three assignments ask you write, use graphical methods and compute the nutritional consequences of real-life food choices. The next four assignments ask you to practice applying economic principles to news articles you find on the internet, and the last four ask you to collect and interpret real-life data to illustrate the issues discussed in class. Each of these assignments is graded out of 5 points. Your score on the lowest one (or any missed assignment) will be dropped, for a total of 50 points. In addition, an in-class midterm is worth 20 points and a three-hour final exam is worth 30 points, for a total of 100.

Summary of Assignments	Grading Weight
Weekly assignments (11 of which one is dropped, 5 pts. each)	50%
Midterm exam (one hour, in class)	20%
Final exam (three hours)	30%

Penalties for late or incomplete assignments

The deadline for each homework assignment and exam is shown on the syllabus. Students who are unable to complete an assignment or exam on time for any reason should notify the instructor by email, text message or phone call prior to the deadline, with a brief explanation for why the extension is needed. Late work for which an extension has not been requested and granted will not be graded.

Academic Conduct

In brief: Education invites you to take the ideas of others and make them your own, so you are encouraged to read widely and to discuss class materials with other students, but any material you produce to show mastery of these ideas must be your own work. More specifically, each student is responsible for upholding the highest standards of academic integrity, as specified in the Friedman School's *Policies and Procedures* manual (http://nutrition.tufts.edu/student/documents) and Tufts University policies (http://uss.tufts.edu/studentAffairs/documents/tuftsStudentHandbook.pdf). It is the responsibility of each student to understand and comply with these standards, as violations will be sanctioned by penalties ranging from failure on an assignment and the course to dismissal from the school.

Accommodation of Disabilities

Students with documented disabilities are entitled to academic accommodation appropriate to their needs. If you require accommodations for this course, please contact me confidentially prior to the end of the second week of classes.

Classroom Conduct

Classroom discussion will be based on material presented in slides and on the whiteboard. To use these ideas it is essential for you to actively hand-write your own notes in real time, especially to hand-draw graphical methods when they are first presented and re-draw them repeatedly as they are applied throughout the semester. After class and to prepare for exams you should compare your notes with the corresponding text and graphs in the slides and readings, redraw the diagrams repeatedly and write your own synthesis to summarize the class in your own terms. Videos of the slides with lecture audio are also available online for you to watch and rewind as needed to see and hear the presentation again.

To help you focus on your own writing and drawing, electronic devices should remain out of sight during class. Students who are uncomfortable with paper-based learning may prefer to study outside of class using an electronic version of the textbook, which is available online with additional interactive learning tools by subscription (about \$100) at courses.bfwpub.com/krugmanwellsecon2.php. Users of the print edition can also use some online tools at bcs.worthpublishers.com/krugmanwellsecon2.

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Course Topics & Assignment Schedule at a Glance

Week / Classes	Topic	Reading (KW 2 nd ed.)	Online lectures (on Trunk site)	Assignments (due at 11:59 pm on date shown)	
0. Jan 15	Introduction and housekeeping	None		None (also no Fri. office hrs.)	
1. Jan 20 & 22	What is economics? How is it useful?	Ch. 1-2	Week 1	1. Personal essay (due Sun. Jan. 25)	
2. Jan 27 & 29	Market equilibrium and social welfare	Ch. 3-4	Week 2 (a&b) + Drawing Videos	2. Graphing ex. on paper (due Mon. Feb. 2 at 9am)	
3. Feb 3 & 5	Government regulation and taxes	Ch. 5-8	Week 3 (a&b)	3. Food choice exercise (due Sun. Feb. 15)	
4. Feb 10 & 12	Household behavior and consumption	Ch. 9-11	Week 4 (a&b)		
5. Feb 17 only*	Agricultural production & food supply	Ch. 12	Week 5 (a&b)	4. Farm news analysis (due Sun. Feb. 22)	
6. Feb 24 & 26	Ag. production (cont'd)	Ch. 13	Week 6 (a&b)	5. Price news analysis (due Sun. Mar. 1)	
7. Mar 3 & 5	Market structure	Ch. 14-16	Week 7 (a&b)	6. Market news analysis (due Sun. Mar. 8)	
8. Mar 10 & 12	Midterm review / midterm exam		Review & summarize class slides and readings		
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9. Mar 24 & 26	Market failure and collective action	Ch. 17-18	Week 9 (a&b)	7. Policy news analysis (Due Sun. Mar. 29)	
10. Mar 31 & Apr 2	Poverty, safety nets and risk	Ch. 19-21	Week 10 (a&b)	8. Poverty data analysis (Due Sun. Apr. 5)	
11. Apr 7 & 9	Recessions, unemploy- ment and inflation	Ch. 22-24	Week 11 (a&b)	9. Macro data analysis (Due Sun. Apr. 12)	
12. Apr 14 & 16	Growth, investment and agriculture	Ch. 25-27	Week 12 (a&b)	10. Global data analysis (Due Sun. Apr. 19)	
13. Apr 21 & 23	Globalization, trade and the food system	Ch. 34	Week 13 (a&b)	11. Food data analysis (Due Sun. Apr. 26)	
14.Apr 28 & 30*	Semester review discussion			Review & summarize class slides and readings	
15. May 5 (Tuesday)	Final exam, 9:00-12:00 (rm. to be confirmed)				

^{*}On Thurs Feb 19th, the Monday schedule applies so there will be no class or review session.
*On Thurs Apr 30th, separate review sessions will be conducted by Megan Mueller and Ashley McCarthy.

Course Topics, Assignment Schedule and Learning Objectives

Note: Schedule is subject to change. Learning objectives will be pursued in terms of their applicability to agriculture, food and nutrition, using examples from the U.S. and a wide variety of other countries.

Weeks 0-1 -- January 15, 20 & 22

Topic: What is economics? How is it useful for food policy analysis?

Reading: Krugman and Wells, Chapters 1 & 2

Homework: #1. Personal essay: Thinking like an economist (upload by 11:59 pm Sun 1/25)

Objectives: Upon completion of this week, students will be able to:

• Describe the principles used in economics to explain and predict social outcomes

- Describe the strengths and limitations of economics as a social science
- Describe the strengths and limitations of economics for everyday life

Week 2 -- January 27 & 29

Topic: Market equilibrium and social welfare in the food system

Reading: Krugman and Wells, Chapters 3 & 4

Homework: #2. Graphing exercise: Drawing by hand (submit on paper by 9:00 am Mon 2/2)

Objectives: Upon completion of this week, students will be able to:

- Use production possibility frontiers to derive supply curves from observed prices and observed quantities
- Use supply and demand curves to derive producer and consumer surplus measures of economic welfare from observed prices and quantities
- Describe the strengths and limitations of using supply curves, demand curves and economic surplus to evaluate social welfare changes

Week 3 -- February 3 & 5

Topic: Government regulation, taxes and subsidies in food markets

Reading: Krugman and Wells, Chapters 5, 6, 7 & 8

Homework: Begin work on #3, the food choice exercise (due next week) **Objectives**: Upon completion of this week, students will be able to:

- Use supply, demand and economic surplus to evaluate the effects of government regulation and taxes on prices, quantities and social welfare
- Use elasticities to characterize consumer and producer response to changes in income, prices and production possibilities
- Use supply and demand diagrams with and without international trade to explain and predict prices, quantities and social welfare changes

Week 4 -- February 10 & 12

Topic: Household behavior and food consumption **Reading**: Krugman and Wells, Chapters 9, 10 & 11

Homework: #3. Food choice exercise: The least-cost diet (upload by 11:59 pm Sun 2/15)

Objectives: Upon completion of this week, students will be able to:

 Use marginal benefits, indifference curves and budget constraints to derive demand curves from observed prices and quantities

- Use the distinction between income and substitution effects to assess consumer welfare changes in response to variation in prices and preferences
- Describe the strengths and limitations of optimization as an explanation for food consumption choices in the U.S. and elsewhere

Week 5 -- February 17 only

Topic: Agricultural production and food supply

Reading: Krugman and Wells, Chapter 12

Homework: #4. News analysis about agricultural production (upload by 11:59 pm Sun 2/22)

Objectives: Upon completion of this week, students will be able to:

• Use marginal costs, fixed costs and input response in production to derive supply curves

- Use the distinction between scale economies and supply response to assess producer welfare changes in response to variation in prices and technologies
- Describe current events in the agricultural sector using economics principles

Week 6 - February 24 & 26

Topic: Agricultural production & food supply (continued)

Reading: Krugman and Wells, Chapter 13

Homework: #5. News analysis about food supply and prices (upload by 11:59 pm Sun 3/1)

Objectives: Upon completion of this week, students will be able to:

- Use economic principles to identify the market conditions needed for perfect competition in agriculture and other sectors
- Describe the behavior of individuals and firms in perfectly competitive markets
- Describe current events in food markets in terms of perfect competition

Week 7 -- March 3 & 5

Topic: Market structure and monopoly power **Reading:** Krugman and Wells, Chapters 14, 15 & 16

Homework: #6. News analysis about food companies (upload by 11:59 pm Sun 3/8)

Objectives: Upon completion of this week, students will be able to:

- Use economics principles to identify the market conditions needed for firms to acquire monopoly power in markets for food, farm inputs and other sectors
- Describe the behavior of individuals and firms in monopolies and other market structures
- Describe current events in food markets in terms of market structure

Week 8 -- March 10 & 12

Topic: Midterm review / midterm exam in class on Thursday **Reading:** Nothing new -- review previous course slides and readings

Homework: Redraw graphs, summarize notes and readings; take mock midterm exam

Objectives: Upon completion of this week, students will be able to:

- Use economic principles to explain and predict consumption, production and economic welfare changes using graphical methods
- Describe the strengths and weaknesses of economics methods relative to other approaches to explain, predict and evaluate responses to current events

-- Spring break --

Week 9 -- March 24 & 26

Topic: Market failure and collective action **Reading:** Krugman and Wells, Chapters 17 & 18

Homework: #7. News analysis about food policy and politics (upload by 11:59 pm Sun 3/29)

Objectives: Upon completion of this week, students will be able to:

- Use economic surplus to evaluate welfare consequences of externalities, environmental damage and other market failures
- Describe the opportunities for collective action to provide public goods and regulation, taxation and property rights enforcement to remedy market failures
- Describe current events in terms of market failure and collective action

Week 10 – Mar 31 & Apr 2

Topic: Poverty, safety nets and risk

Reading: Krugman and Wells, Chapters 19, 20 & 21

Homework: #8. Data analysis on poverty and nutrition (upload by 11:59 pm Sun 4/5)

Objectives: Upon completion of this week, students will be able to:

- Use economic principles to apply poverty lines and other thresholds for measuring welfare and targeting social programs
- Describe major influences on income distribution, inequality and social mobility
- Obtain and present current data on global poverty and malnutrition rates

Week 11 – April 7 & 9

Topic: Recessions, unemployment and inflation Reading: Krugman and Wells, Chapters 22, 23 & 24

Homework: #9. Data analysis on income, jobs and inflation (upload by 11:59 pm Sun 4/12)

Objectives: Upon completion of this week, students will be able to:

- Use economic principles to explain and predict business cycle fluctuations, including the timing and extent of recessions, unemployment and inflation
- Describe the role of fiscal and monetary policy in managing business cycles
- Obtain and present current data on incomes, employment and inflation

Week 12 - April 14 & 16

Topic: Growth, investment and agriculture **Reading:** Krugman and Wells, Chapters 25, 26 & 27

Homework: #10. Data analysis on growth and development (upload by 11:59 pm Sun 4/19)

Objectives: Upon completion of this week, students will be able to:

• Use economic principles to explain and predict economic growth and structural transformation between agriculture, industry and services over time

- Describe the experience of economic growth across countries and regions
- Obtain and present current data on economic growth and development

Week 13 -- April 21 & 23

Topic: Globalization, trade and the food system

Reading: Krugman and Wells, Chapter 34 and review Chapter 8

Homework: #11. Data analysis on world food trade (upload by 11:59 pm Sun 4/26)

Objectives: Upon completion of this week, students will be able to:

 Use economic principles to explain, predict and evaluate changes in international trade, foreign investment and capital flows among countries

Describe the major changes associated with globalization of agriculture and food

• Obtain and present current data on food production, consumption and trade

Week 14 – Apr 28 & 30

Topic: Semester review

Reading: Nothing new -- review previous course slides and readings

Homework: Redraw graphs, summarize notes and readings; take mock final exam

Objectives: Upon completion of this week, students will be able to:

- Use economic principles for the various purposes described in the course description and weekly objectives
- Describe those various applications of economic principles in terms of their common features, strengths and weaknesses
- Judge the applicability of economics principles for personal, career and social decisions

Week 15 – May 5 only

Final exam: Tuesday May 5th, 9:00 – 12:00 (extension of usual class time)
Tentatively in Jaharis Auditorium, room to be confirmed