

# Food, Population, Agriculture and the Environment

ECON 4389-1 (22953)

Tuesday – Thursday 2:30 to 3:50 PM

Room 115 M

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Tuesday, August 25, 2015 to Thursday - December 3, 2015

(Previously taught as Economic Geography or various titles with Food and Agriculture and Population in them. By Fall 2016, course will have a fixed title and number.)

**Course Objective:** The objective of this course is to provide reading material and lectures which facilitate a better understanding of the world, its politics, its agriculture and food production, the dynamics of population, the problems facing the global environment and the changing global economy in which we live. We will also explore the diversity of different cultures and peoples and the condition of those who have experienced a dramatic transformation and improvement in the conditions of their life and those that have not. The diversity of the reading matter and topic assignment is considerably greater than age | 2 can be achieved in a three hour course in one semester. The boundaries for the course are wide allowing the students to fashion a course that responds to their particular needs and interests as long as they in some way cover all three topics of the course title, use all of the assigned sources and largely within the course boundaries.

## Required reading:

Hybrid: The History and Science of Plant Breeding by Noel Kingsbury, University of Chicago Press (November 15, 2011)

ISBN-10: 0226437132

ISBN-13: 978-0226437132

Consider the Fork: A History of How We Cook and Eat by Bee Wilson, Basic Books; (October 8, 2013)

ISBN-10: 0465056970

ISBN-13: 978-0465056972

Cuisine and Empire: Cooking in World History –by Rachel Laudan (Author), University of California Press (November 21, 2013)

•ISBN-10: 0520266455

•ISBN-13: 978-0520266452

## Either

The Oxford Handbook of Food, Politics, and Society (Oxford Handbooks)

Hardcover by Ronald J. Herring (Editor) Oxford University Press (January 29, 2015)

ISBN-10: 0195397770

ISBN-13: 978-0195397772

or

Food and Culture: A Reader Paperback by Carole Counihan (Editor), Penny Van Esterik (Editor), Routledge; 3 edition (October 31, 2012)

ISBN-10: 0415521041

ISBN-13: 978-0415521048

## And Either

Why Did the Chicken Cross the World?: The Epic Saga of the Bird that Powers Civilization by Andrew Lawler (Hardcover), Atria Books (December 2, 2014)

•ISBN-10: 1476729891

•ISBN-13: 978-1476729893

or

The Triumph of Seeds: How Grains, Nuts, Kernels, Pulses, and Pips Conquered the Plant Kingdom and Shaped Human History by Thor Hanson Basic Books: March 25, 2015.

ISBN-10: 0465055990

ISBN-13: 978-0465055999

Except for changing of dates, the syllabus will be the same as for the Spring semester 2015.

**Assignments (general guidelines):** Please read the syllabus carefully. I have taught these courses for many years. Over the last decade, I have made major changes to the way that it is taught and I have not until now changed the syllabus to fully reflect these changes.

1) You have five books to read for the course. I assume that you can read and understand them so I will occasionally refer to them but I will not lecture on them. Since I will not be testing you on them, the only way that I know that you have read them is if your papers reflect a general understanding of them and every paragraph in your papers cites at least one assigned source and all the assigned sources are substantially used in your papers.

2) You are to write two papers 25 to 30 pages total submitted at the due dates given below

A. The 1st paper will examine the history of food production that took humans from earliest times when humans number just a few million to circa 1960 when there were three billion of us. At least four of the five books can be used on this paper and it is to be a minimum of 10 pages.

B The 2nd paper will examine the technological changes in food production and basic hygiene (using water as an example) that have allowed for population growth from 800 million in circa 1800 to 7.2+ billion today. These changes involved a nine fold increase in population and a doubling of life expectancy.

Included will be the changes that have allowed our food production system to be globalized. My 4 to 5:20 PM Economic Development class will examine the technological changes in transportation and refrigeration that allow food to be transported globally; this class will focus on how it is grown and processed and its

implications for human wellbeing. All five books could potentially be used in this paper - minimum 15 to 20 pages in length.

3) Class will form into groups for project presentations beginning March 24th. Project topics and presentation dates are posted. All groups will be formed by March 12th before Spring Break. Doing the reading, writing your papers and being part of a group making a presentation is the larger part of the learning process for the course and the receipt of a grade. Class attendance is also an important part of your learning for the course. Since there are no exams, class attendance is the only measure of what you are learning in class, however imperfect it may be. Attendance is particularly important for the project presentations. Most everyone works hard to give their presentation so they deserve the courtesy of your attendance and attention – no looking at cell phones, no reading books or online, no sleeping – just as you want their attention when you make your presentation.

4) If you attend class regularly, pay attention and do your other work satisfactorily, there will be no exams as stated elsewhere. However, if you have more than two unexcused absences for my lectures and one or more for the presentations, then you will have a final exam at the regularly scheduled time. The more absences that you have, the more questions that you will have to answer and the more difficult that it will be to complete the exam during the allotted time and therefore the more difficult that it will be to get a decent grade for the exam and for the course. Even more excessive absences will bring a grade penalty in addition to the severity of the final exam. Late papers are also subject to a grade penalty.

5) For any deviation from the syllabus, an exchange of emails is required verbal authorization is not sufficient - with the email granting permission being attached to your paper.

6) Please number your pages. Every paper should have two reference sheets with your name, course name and number, and number of pages of your paper. In other words, if the text for your paper is 15 pages (not counting separate cover sheet if you use one) then the reference pages will be numbered 15a and 15b. I will check to see that all the referenced sources were used in the paper and put an identifying mark on it. When you turn in your 2nd paper, tear off the marked reference page from your 1st paper and attach it to the 2nd paper. **YOU MAY USE OTHER RESEARCH MATERIAL AS WELL. IF YOU USE INFORMATION FROM THE WWW, PLEASE GIVE AS COMPLETE A CITATION AS POSSIBLE INCLUDING THE URL.**

Give PAGE NUMBERS for all citations from printed matter. For ebooks, if there are no page numbers, give the chapter or other identifying features so I can find the cited material. As a VERY ROUGH RULEOF-THUMB, use only sources published this century, particularly for data unless there is a compelling reason to use an older source. All material that is not original to you must have a citation. Quotation marks are required only when you are using someone else's wording. If you are using their ideas and facts that are put in your own words, you still need to cite the source but quotation marks would be inappropriate. Page | 6 Please do not start a sentence with "I feel" or in "my opinion." Instead use phrases such as "I conclude" or "it is my judgment based upon the evidence" etc. If you present solid evidence on an issue and then follow it with a rational argument to reach a conclusion, I will assume that this is not only your conclusion but it is also how you "feel" or that it is your "opinion." I care about your feelings but for the purpose of evaluating your work, I need to know what you have learned. Assignment due dates (with some flexibility)

**General guidelines:** Under current University policy, your email address given in People Soft is considered the official method of notification making you responsible for any information sent to that address. The best advice is to check it daily. Not having checked it will not be an acceptable excuse for failing to comply with the Page | 8 instructions given there. If you turn in your papers for my class in the main economics office - 204 M - as I often allow you to do, please do not call or email me asking if I received them. And do not ask what grade that you received. I do not mean to be rude but your calls or emails will not likely be answered. Keep digital copies of all of your papers in the very unlikely event that they are somehow lost. After the due date, ALL PAPERS turned in other than in class, must be turned in on the date that I gave you before 3 PM, Turning in papers other than in class is permitted only under special circumstances and permission must be given by me in advance. Under no circumstances are you to slide a paper under my office door. It is very difficult for me to retrieve it and I often roll over it before even being able to try and pick it up. If you have an acceptable, verifiable reason beyond your control why you were unable to complete your work such as hospitalization, then you may either bring or send the documentation to me and receive an "I." Please no elaborate excuses, only documented cases can be accepted. Since we have to fill out a form for the "I" with your signature, send the documentation only if you are physically unable to bring it. It also has to be approved by the department. Needless to say, without adequate documentation to support the form, an "I" cannot be given. Unlike an

"I," a grade of "F" can no longer be removed except in the most extreme set of circumstances. If towards the end of the semester, it becomes obvious to you that you will not be able to complete your work, you might consider dropping the course by the last day to drop a course or withdraw without hours counting towards the Enrollment. I hope that none of you find it necessary to withdraw. You will not be given a failing grade for withdrawing since I have not given any exams. If you drop the course using People Soft and for some reason the system fails to record your drop, contact the Registrar's Office in order to correct the Page | 9 problem. Do not contact me or my T.A. or the Economics Department about this matter. If you receive an "F," I will gladly change it to a "W" if notified to do so by the Administration. I am not allowed to do it on my own nor am I allowed to give you a "W" for a final grade unless the final role sheet shows that you have dropped. Every semester, a large number of students used to take my courses as independent study without attending class. I have always sought to make my courses available to those who could not attend for whatever reasons. This option is NOT open for any of my classes except my Asian Development class taught in summer and only available as independent study. Over the last few years, I have substantially restructured the way that I teach my courses in a way that makes independent study impossible. If for some reason after the semester begins, you can no longer attend class (other than for a verified medical emergency), then I am afraid that you will have to withdraw from the course. Please do not ask to be allowed to do the course as independent study. My word may be my sacred bond but my memory for promises made is not. If you wish some change in paper topic or other course change, you may seek permission verbally BUT such permission is only valid if confirmed by an exchange of emails shortly after permission is granted. The student will return printed out a copy of the email approving a change and turn it in with whatever you are submitting. Do not ask me later in the semester to "remember" having given you permission to for a special request.

First Day of Class Tuesday, August 25, 2015

*Martin Luther King holiday; Labor Day holiday Monday September 7, 2015*

**Last day to add a class -Tuesday September 1, 2015**

**Last day to be added from Waitlist queue process  
- Tuesday September 1, 2015**

Last day to drop a course without hours counting towards the **Enrollment Cap for Texas Residents** – Wednesday September 9, 2015

First Paper is Due – Tuesday September 22, 2015

Honor System – If you have two or more Exams on the Week of September 21<sup>st</sup>, the Due Date for the first paper without penalty is Tuesday September 29, 2015

Second Paper is Due – Tuesday October 20, 2015

Honor System – If you have two or more Exams on the Week of October 19<sup>th</sup>, the Due Date for the first paper without penalty is Tuesday October 27, 2015

**Last day to drop a course or withdraw with a 'W' – Friday October 30, 2015**

*Thanksgiving holiday - November 25-28, 2015 - Wednesday- Saturday*

Last day of class – Thursday - December 3, 2015 Thursday

Make up days for class days officially canceled by the university (if necessary) or Reading Period - Monday- Tuesday, December 7-8, 2015

Close of the session - Thursday December 17, 2015

Commencement – Friday - December 18, 2015, Friday

Deadline for faculty to post Final Grades in myUH – Monday **December 21, 2015**

Tentative Schedule for Project Presentations –

Economics 4389 – Fall 2015<sup>th</sup>

October 27, 2015

**Group I – Large Brains, Small Gut, High Density Foods, Cooking - Did Cooking Make Us Human?**

This will be a small group project which will show a number of videos interspersed with narrative discussions. Will include material from Blackboard under Did Cooking Make Us Human? & Hunting Made Us Human?

## Videos

BBC Horizon [Did Cooking Make Us Human - BBC Horizon?](#)

<https://www.youtube.com/watch?v=qOuv4U7u1j0>

October 29

[Suzana Herculano-Houzel](#) - What is so special about the human brain?

[http://www.ted.com/talks/suzana\\_herculano\\_houzel\\_what\\_is\\_so\\_special\\_about\\_the\\_human\\_brain?language=en](http://www.ted.com/talks/suzana_herculano_houzel_what_is_so_special_about_the_human_brain?language=en)

[Waiter, there is a gene in my soup! Jimmy Botella at TEDxUQ](#)

<https://www.youtube.com/watch?v=Mwzq-swl4cI>

November 3<sup>rd</sup> & 5<sup>th</sup> 2015

## Group II – History of Food and Food Production

A series of power-points on the history of agriculture and food production including:

- 1 - Pictures comparing a range of fruits, vegetables and grains *and their wild ancestors*.
- 2 -Pictorial history of the methods, tools and technology of agriculture and food production in the fields.
- 3 – Using tables, graphs, charts and pictures provide a history of agricultural yields from plants and animals.
- 4 – Show the impact of plant breeding by illustrating it showing how humans bred from the plant family Brassica. “Starting in the wild as mustard, it has been bred into cabbages, Brussel sprouts, mustard greens, cauliflower, rapeseed (canola), turnips, rutabaga, collard greens, bok choy, watercress, radish, wasabi and of course, broccoli” – all this from a little mustard seed.



Carry the history of agriculture to more recent times so that it links to other Projects.

November 10<sup>th</sup> & 12<sup>th</sup> 2015

## **Group III – Modern Industrial Agriculture and Globalization**

A – Household food preparation before 1870 in U.S. and around the world

B- The “Industrial Kitchen” (Consider the Fork: A History of How We Cook and Eat by [Bee Wilson](#))

C- - 20<sup>th</sup> century changes in the home kitchen (Consider the Fork and The Warmest Room in the House: How the Kitchen Became the Heart of the Twentieth-Century American Home by [Steven Gdula](#) )

D - The Industrialization of the other duties for women in the household from making clothing from the basic raw materials, gathering fuel for heating and cooking, obtaining water for cleaning & washing, cooking and drinking to indicate what consumed a women’s entire day. This would a pictorial history of the household tools of production such as the spinning wheel to the many components of textile production in the Industrial revolution. Also includes bring the technology into the household such as the Singer Sewing Machine with interchangeable parts, furnaces and stoves with coal, piped or bottled gas (See for example a recent book by Sean Patrick Adams – Home Fires), piped in clean water washing machines etc.

**1** -1500 -- 1800; - Columbian exchange potatoes feeding livestock (meat, milk, chicken, eggs), –potatoes – sweet potatoes 1492 - present

**2** - 1500 -- 1800; - Columbian exchange – maize (corn), 1492 to present

**3** - **1500** -- 1800; - Columbian exchange –improved seed to yield ratios from breeding & improved cultivation

**4** - **1800** – 1920 (Liebig – minerals. his Law of Minimum etc.; Guano, SuperPhosphate, Darwin, hybridity; Ag research etc.; synthetic fertilizer, pesticides, vitamins)

**6** **1920 – 1960** (hybridization, mutation breeding, synthetic fertilizer, synthetic pesticides; vitamins, land sparing and reforestation)

7 1960 – Present (Green Revolution; rDNA and other “unnatural” forms of plant breeding, land sparing and reforestation))

**8 - Food Production – present to 2040**

**November 19, 2015**

**Group IV a - Trends in Global poverty and Hunger since 1950**

1 - Hunger and Malnutrition – overall trend since 1960

2 - Hunger and Malnutrition – current conditions

**Group IV b – Food Production, Hunger, Malnutrition, & Child Survival**

**November 24, 2015**

**Group V - Genetic Modification - transgenic (rDNA), Mutation breeding, etc. - Golden Rice**

**December 1<sup>st</sup> & 3<sup>rd</sup> 2015**

**PowerPoint course Summary for both courses combined**

December 3,, 2014– 3:30 to 3:50 – course evaluation

Down on the Farm either as a live presentation by Sheryl Pannell or as a video will be on October 20 & 22 2015.

In case of a University closure during the project presentation period, we will use the University make-up day to complete the projects.