

Development Issues in the Global Economy

ECON 4389-2 (22954)

Tuesday – Thursday 4 PM to 5.20 PM

Room 115 M

Dr. Thomas DeGregori Phone: [\(713\) 743-3838](tel:7137433838)

Email: trdegreg@uh.edu

Website: <http://www.uh.edu/~trdegreg>

Office: 209D, McElhinney Hall

Office Hours: TTh 1 to 2:20 PM, 5:20 to 6 PM

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

(Previously taught by me as Economic Development. Other Faculty will be offering Econ 3351 as a more traditional Development course. 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:

Prime Movers of Globalization: The History and Impact of Diesel Engines and Gas Turbines by Vaclav Smil, The MIT Press (February 8, 2013)

ISBN-10: 0262518767

ISBN-13: 978-0262518765

The Sea and Civilization: A Maritime History of the World , by Lincoln Paine , Knopf (October 29, 2013)

ISBN-10: 140004409X

ISBN-13: 978-1400044092

Dawn of the Electronic Age: Electrical Technologies in the Shaping of the Modern World, 1914 to 1945 by Frederik Nebeker, Wiley-IEEE Press (March 30, 2009)

ISBN-10: 0470260653

ISBN-13: 978-0470260654

The Chlorine Revolution: Water Disinfection and the Fight to Save Lives PB by Michael J. McGuire, American Water Works Assn (September 20, 2013)

ISBN-10: 1583219137

ISBN-13: 978-1583219133

Either

A History of Science in World Cultures: Voices of Knowledge Paperback by Scott L. Montgomery (Author), Alok Kumar (Author), Routledge (July 16, 2015)

ISBN-10: 0415639840

ISBN-13: 978-0415639842

or

The Global Atlantic: 1400 to 1900 by Christoph Strobel (Paperback), Routledge (February 25, 2015)

•ISBN-10: 0765639521

•ISBN-13: 978-0765639523

The syllabus will be the same as the syllabus for Spring 2015, Econ 3351 except of course for changing the dates. Econ 3351 will be offered in Fall by a different faculty member and will be essentially a different course from mine.

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 transportation technologies that facilitated trade form for the last 800 years when humans numbered possibly 400 million to circa 1960 when there were three billion of us. At least two or possibly three 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 transportation, communication and production in the last 150 years that have allowed for a globalized economy of 7.2+ billion today. These changes involved a nine fold Page | 4 increase in population and a doubling of life expectancy since 1800. My 2:30 to 3:50 Econ 4389 course will examine the changes that have allowed our food production system to be globalized over this same time period. This class will examine the technological changes in transportation and energy that allow food to be transported globally while the other 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 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 21st, 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 19th - 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 3351 – Fall 2015th

October 27, 2015

Group I Power Technologies and their components to 1900 - cranks, gears, rocker beams, water wheels, windmills, sails & steam power – ships – transportation

An outline history of selective power technologies with a running explanation including the operating principles:

1 – Water- wheels (and windmills) overshot and undershot – With wind and waterpower, show history from river small sailing vessels to transoceanic ships

2 – Power transmission – gears (including sun and planetary), cranks, rocker beams etc. and how they work

3 – From atmospheric pumps to steam engines with working power point models easily found online. Atmospheric pressure and how it works.

4 – Steam power from stationary engines for mining to ever larger steam engines powering factories to smaller ones mounted on *rail cars or river boats and steam ships*.

5 – The development of electric power starting with turbines.

6 – Tie into the development of internal spark engines.

October 29 & November 3, 2015

Group II - 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- 20th century changes in the home kitchen (useful non-assigned sources in addition to Consider the Fork are Cuisine and Empire: Cooking in World History by [Rachel](#) Laudan and The Warmest Room in the House: How the Kitchen Became the Heart of the Twentieth-Century American Home by [Steven Gdula](#))

Pictorial history of the methods, tools and technology of food preparation in the house. **Very light presentation** of A, B &C -- minimize overlap with Econ 4389 presentations.

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.

Hans Rosling: The magic washing machine

http://www.ted.com/talks/hans_rosling_and_the_magic_washing_machine

November 5th, 10th & 12th 2015

Group III - Power Technologies for the Modern World Historical to 1850 to the Present. – Diesel, gas turbine, electricity – ships

– transportation

1. *gas turbine engine to modern jet planes*
2. *diesel power, containerization and global trade*
3. *electricity light and fractionalized power*

Beyond the three historical topics, group will identify and describe technologies – rail, ports, ships, diesel trucks, planes, metallurgy that make globalized production cost effective in contrast to local technologies

This section might be expanded past three periods to as many class periods as necessary depending on how many students want to be involved and how detailed and in depth the group is willing to examine the technology underlying the modern global economy.

I will expand in some detail on the 1st day of class what I consider to be the potential of this group project. This is not a class in engineering or one of the sciences but it does not mean that we cannot explore and understand some of the technology that has allowed the globalized economy to emerge. In my other class, we will be studying the science and technology that allows us to grow enough food to feed 7.2+ billion people. In this class, we examine the refrigerated transportation network which allows consumers with income eat fresh and preserved food from the entire globe at all times of the year. We will want to understand the technology that makes it cheaper with less environmental impact for consumers in the UK to eat mutton from sheep raised in New Zealand rather than from sheep raised at home. Or why buying at your local farmer's market may be a good thing in many ways but it is not likely to be more environmentally sustainable than so-called large scale “industrial” produced food.

What I would like to see accomplished in the project would be a more detailed look at each step of the process from farm to fork, or the smart phone that you have in class from factory anywhere on the planet to you. To look at every step in the process would be beyond the capacity of this course but particular steps in the process, communication networks between small farmers or other suppliers and global traders, rail lines and the engines on them, ports in some detail including an historical narrative and separate presentation on the Port of Houston, jumbo cargo jets, large refrigerated trucks, etc. etc.

I would also like presentations on the different materials necessary to make a smart phone and where do the raw materials for them originate? Or with each new class of jet planes, what are the materials being used and/or develop to make them lighter and more fuel efficient? One could also are the free range cattle have a larger environmental impact than feedlot finished cattle though few would believe you no matter how strong the evidence may be.

I have a range of different technologies that I would like to see studied. The sum total of the various technologies and the science underlying them should help us understand how the global economy operates. I would argue in advance that such a comprehensive life cycle analysis would raise serious questions about largely unchallenged ideas about what is the most sustainable forms of production.

November 17, 2015

Group IV – The Global Value Chain (Check online publication on the subject by IFPRI)

Group V -- Digital Technologies and other advanced technologies for use in Development –other than Mobile phones

November 19, 2015

Hans Rosling: The best stats you've ever seen

http://www.ted.com/talks/hans_rosling_shows_the_best_stats_you_ve_ever_seen

Hans Rosling: The seemingly impossible is possible

<http://www.gapminder.org/videos/hans-rosling-ted-talk-2007-seemingly-impossible-is-possible/#.VBeJKWoo59A>

GMO controversies - science vs. public fear: Borut Bohanec

https://www.youtube.com/watch?v=mz4_TwdaYeI

November 24, 2015

Group VI - Trends in Global Population – life expectancy, child survival, births & deaths,– Immunization and Disease Prevention

1 - Trends in global life expectancy including poor countries since 1950 - causes and consequences - show how many more people would be dying each year if 1950 death rates prevailed in recent years

2 - Trends in birth and death for poor countries and its impact on population change - causes and consequences

3 - Trends in child survival in poor countries 1960 to present - immunization, improved food supply etc. How many children are not dying each because of current death rates and not those in 1990?

4 - Trends in life expectancy and population growth in developed countries

A - -Long term since 1500 –very brief overview

B–Provide more detail since 1900 - antibiotics, regularized food supply etc. mention but only mention chlorination of water - very important but its own topic in the following week

5- Birth and death for developed rich countries (Group II) - people around the holiday dinner table 1914 & 2014

6 - - Child survival in developed countries – minimize overlap with Group V – 8, 9 & 10.

December 1st & 3rd 2015

PowerPoint course Summary for both courses combined

April 30, 2014– 5:00 to 5:20 – 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.