

AREC 460: Agriculture and Resource-based Economic Development
Colorado State University
Spring Semester 2019
9:30-10:45 TR, 105 Military Sciences Building
Dr. Andy Seidl, Professor

Contacts:

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Office hours:

Tues & Thurs 2:00-3:00 pm and by appointment and drop in.

Description:

This course involves economic insights into food and nutrition security in developing countries, focusing on agricultural and natural resource management issues at the national and sub-national scale. The course hopes to shed light on the economic drivers that result in poverty and hunger that plague more than 3 billion people, some 1/2 of the Earth's population, and to propose some local, national and international policy solutions. Although we focus on international agricultural and natural resource development issues, many of these challenges can be observed in rural Colorado as well.

The perspective of the course is of development as managing scarce capitals toward improvements in human well-being. Agriculture and natural resource-based economic development are a part of a rural development portfolio dependent upon the rational management of the locally available resource base (focus on natural, financial and human capital). In addition, the class will engage in a discussion of the Sustainable Development Goals and progress toward achieving these global goals at the national scale.

Prerequisite: AREC/ECON 306 *or* consent of instructor.

Learning objectives:

Students will be able to:

- Critically discuss the drivers of natural resource-based economic development
- Critically discuss the measures of (sustainable) (economic) development.
- Critically discuss the principal economic development opportunities and constraints presented to natural resource dependent communities in Colorado and in developing countries.
- Identify the opportunities and constraints faced by Colorado communities and communities in developing countries when considering agriculture, forestry, tourism, mining, oil and gas, and other contemporary resource based economic development engines for the communities
- Discuss current international efforts to improve the measurement and monitoring of environmental quality and quantity and their role in economic development and poverty reduction.

Policies:

These should be self-evident. However...

- 1) Issues covered in this course can touch upon deeply held and personal values. I strongly encourage you to discuss these highly nuanced issues both inside and outside of class. Rarely is an issue reducible to black and white, for or against. Rather their many shades and textures, contexts and perspectives, are what make development discussions challenging and rewarding. General rules of civil discourse, mutual respect and decorum should be adhered to at all times so that all voices can be heard and valued.
- 2) Please be on time. I will begin and end class on time to be respectful of your time. Please reciprocate.
- 3) All university policies about academic honesty most definitely apply.

Text/materials:*Principal text:*

Norton, G.W., Alwang, J., and W.A. Masters. 2014. The economics of agricultural development: World food systems and resource use. Routledge Publishers. 3rd Edition.

Evaluation:

The class will be graded in the following manner:

A > 90; B > 80; C > 70; D > 60; F < 60. (+/- will be at my discretion)

Performance on the following work will comprise the evaluation:

- 1) Homework (Problem sets; critiques): 20%;
- 2) Midterm examinations (2): 60%;
- 3) Group project: 20%.

Homework 1:

Graphical and/or mathematical applications of the concepts and tools taught in class. They will be due one week from the date of assignment, and submitted before 5 pm of the due date. Collaboration is anticipated and is not discouraged. However, each question submitted shall be individually authored, in the student's own words, and shall not be duplicated from another current or past student or copied verbatim from the text. Photographs of hand or computer drawn graphs are acceptable. Photographs of graphs directly from the book are not acceptable. Late submissions are accepted until the exercise is returned to the class. Such submissions will be subject to a 10% per day decrease in total possible points obtainable. (3 @ 5% each)

Homework 2:

Students will complete two one page (single spaced, 11 pt font) reflections of a development economics oriented seminar that you have attended during the semester. The write-up should discuss what was presented and what you learned from the presentation through an economic lens. Grading criteria will include an assessment of writing quality including logical support, *economic rigor (graphical and/or mathematical)*, grammar, spelling and form. I will mention some of the relevant events in class (for example, SOGES' Managing the Planet series <http://sustainability.colostate.edu/soges-events/managing-planet-panel-series>) and via email, but you are not restricted to these suggestions. If you have questions, please contact me for approval. (2 @ 2.5%)

All type 2 homework submitted before 5 pm March 15 (Spring Break) will be awarded a 10% bonus.

Exams:

Examinations will be in class and will be short answer and essay format, typically consisting of 4-5 multipart questions. There will be no final exam. Exam 1 (30%) covers the first half of the course. Exam II (30%) covers the second half.

Group project:

The class will have the opportunity to explore more completely the development progress and challenges facing emerging national economies reliant upon agriculture and natural resources. This year, I anticipate Argentina, Fiji, Honduras, Kazakhstan, Mali, Tanzania, and Vietnam, will be the focus of our investigations. Each group of approximately 3-4 students will provide an overview and analysis of one of these countries through the lens of agricultural and natural resource based economic development and the Sustainable Development Goals and report their findings to the rest of the class. The report should generally use the indicator data reviewed in class to provide a country baseline for the SDGs indicating where data are robust and thin and providing an overall synthesis and recommendations moving forward in areas of particular strength/preparedness and weakness/priority. Generally, essential sources of exposition will include:

- An assessment of the current stocks and flows of important sources of natural capital
- A review of the relevant development indicators (with particular attention to SDG measures) over time and relative to peer nations
- A synthesis of the above in identifying opportunities and constraints to (agriculture and natural resource based) economic development for the country.

A final project report will be no more than 20 pages of 11 pt font, double-spaced text, inclusive of all tables, graphs, bibliographical materials, etc. and will comprise 75% of the group grade (assessed by the professor) and the oral and visual (Power Point or Prezi) presentation will be 25% of the group grade (assessed by the class). Individual grades may be adjusted based upon peer assessment of their involvement in the group project and by participation in the peer assessment of the oral presentation.

Extra credit:

You may choose at most one of the two options below for extra credit of at most 2.5% of your final grade.

- a. This course repeatedly touches on the themes of severe poverty and hunger that plague some 3 billion people living on less than \$2.50 per day. Since CSU students generally have chosen their parents well and have little experience with either abject poverty or long term hunger, a student who wishes to submit a 750 word essay reflecting on their experience resulting from a 24 hr fast or a week 'living on \$4.20 per day' (the SNAP Challenge: <https://www.hungerfreecolorado.org/snap-challenge/>) will be provided this opportunity. Let us be clear that this is not a requirement of the course, rather a choice freely entered into by the student having taken due care and consideration for his or her own health and work responsibilities. Note: Being hungry does not make you smarter or more productive.
- b. Book review: Students will review 'A new blueprint for a green economy.' The book review will be no more than 750 words, spending at least ½ of the review providing an economic critique of the work. The critique should include one or more mathematical or graphical illustrations of a core issue or concern with the book.

Expected Course Outline (subject to change according to the interests and needs of the class):

Module 1: January 22, 24, 29, and 31:

Dimensions of world food and development problems; Hunger, malnutrition, economics of food demand, population, and demography.

Readings:

- Norton, G.W., Alwang, J., and W.A. Masters. 2014. The economics of agricultural development: World food systems and resource use. Routledge Publishers. Chapters 1-4.
- How we can make the world a better place by 2030: <https://www.youtube.com/watch?v=o08ykAqLOxk>
- Food waste by WBCSD: <https://www.youtube.com/watch?v=TgJsSInJuh0>
- World poverty clock: <https://worldpoverty.io/>

Module 2: Feb 5, 7, 12, 14:

Development theories and the role of agriculture and resource-based economic activities.

Readings:

- Norton, G.W., Alwang, J., and W.A. Masters. 2014. The economics of agricultural development: World food systems and resource use. Routledge Publishers. Chapters 5-6.

Homework 1a Due February 15 by 5 pm.

Module 3: Feb 19, 21, 26, 28:

Agriculture in traditional societies, subsistence, determinants of agricultural systems, resource use and sustainability, human resources, gender roles, formal and informal institutions.

Readings:

- Norton, G.W., Alwang, J., and W.A. Masters. 2014. The economics of agricultural development: World food systems and resource use. Routledge Publishers. Chapters 7-10.

Homework 1b Due March 1 by 5 pm.

March 5 & 7: Review of first 6 weeks and Midterm Exam I.

Module 4: March 12, 14, 26, 28, April 2.

Theories of development, trade, and aid

Readings:

- Norton, G.W., Alwang, J., and W.A. Masters. 2014. The economics of agricultural development: World food systems and resource use. Routledge Publishers. Chapters 11, 12, 13, 15, and 16.

March 15: All Type 2 homework turned in by this date will be awarded a 10% bonus.

Spring Break: March 19 & 21

Module 5: April 4, 9, 11, 16, 18, 23.

Measuring better to manage better; Measures of wellbeing, Greening GDP, the Sustainable Development Goals.

Readings:

- UN Sustainable Development Goals:

World Bank SDG Databook: <http://datatopics.worldbank.org/sdgateas/>

SDGs: <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

UN Data Catalog: <https://undatacatalog.org/>

World Bank SDG Database: <https://data.worldbank.org/data-catalog/sustainable-development-goals>

Measuring Progress.eu. <http://www.measuring-progress.eu/>

UNDP. 2015. Towards green and inclusive prosperity – building green economies that deliver on poverty reduction. <http://www.undp.org/content/undp/en/home/librarypage/poverty-reduction/towards-green-and-inclusive-prosperity.html>

UNDP Development Indicators 2018 update: <http://report.hdr.undp.org/>

Kate Raworth, Doughnut Economics:
https://www.ted.com/talks/kate_raworth_a_healthy_economy_should_be_designed_to_thrive_not_grow

- Ecosystem service identification, quantification and indicators.

<http://www.bipindicators.net/>

- World Bank Natural Capital Accounting:

Lange, Glenn-Marie (editor); Wodon, Quentin (editor); Carey, Kevin (editor). 2018. *The changing wealth of nations 2018: building a sustainable future (English)*. Washington, D.C. : World Bank Group.

<http://documents.worldbank.org/curated/en/727941517825869310/The-changing-wealth-of-nations-2018-building-a-sustainable-future>

<http://www.worldbank.org/en/news/video/2014/05/21/countries-go-beyond-gdp-to-make-natural-capital-count-for-development>

<http://www.worldbank.org/en/topic/environment/brief/environmental-economics-natural-capital-accounting>

World Bank. 2016. The Little Green Data Book 2016. Washington, DC: World Bank. © World Bank. License: CC BY 3.0 IGO <https://openknowledge.worldbank.org/handle/10986/24543>

WAVES World Bank: www.wavespartnership.org

http://www.worldbank.org/en/news/feature/2018/01/30/moving-beyond-gdp-to-look-at-the-world-through-the-lens-of-wealth?cid=EXT_WBEmailShare_EXT

- Norton, G.W., Alwang, J., and W.A. Masters. 2014. The economics of agricultural development: World food systems and resource use. Routledge Publishers. Chapters 19 and 20

Homework 1c Due April 19 by 5 pm

April 25 & 30: Second half of class synthesis, review and examination

Thursday: Synthesis and review

Tuesday: Midterm Examination II

May 2: Independent group work session.

All remaining homework due May 3 by 5 pm

May 7 & 9: Class Presentations

Tuesday: Group Presentations: Argentina, Fiji, Honduras, and Kazakhstan. 15 minutes presentation, 3 minutes questions, per country.

Thursday: Group Presentations: Mali, Tanzania, and Vietnam. Final synthesis of lessons learnt. Class evaluations.

Group project paper due May 10 by 5pm

Academic Integrity Policy

This course will adhere to the CSU Academic Integrity [Policies and Guiding Principles](#) as found in the General Catalog and the [Student Conduct Code](#).

In this course, at a minimum, violations will result in a grade of zero for the work in question and a report to the Office of Conflict Resolution and Student Conduct Services.

CSU Honor Pledge

Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, I will ask that you affirm the CSU Honor Pledge as part of completing your work in this course. *While you will not be required to affirm the honor pledge, you will be asked to affirm the following statement at the start of your exams: "I have not given, received, or used any unauthorized assistance."* Further information about Academic Integrity is available at CSU's [Practicing Academic Integrity](#).

Principles of Community

The Principles of Community support the Colorado State University mission and vision of access, research, teaching, service and engagement. A collaborative, and vibrant community is a foundation for learning,

critical inquiry, and discovery. Therefore, each member of the CSU community has a responsibility to uphold these principles when engaging with one another and acting on behalf of the University.

Inclusion:

- We create and nurture inclusive environments and welcome, value and affirm all members of our community, including their various identities, skills, ideas, talents, and contributions.

Integrity:

- We are accountable for our actions and will act ethically and honestly in all our interactions.

Respect:

- We honor the inherent dignity of all people within an environment where we are committed to freedom of expression, critical discourse, and the advancement of knowledge.

Service:

- We are responsible, individually and collectively, to give of our time, talents, and resources to promote the well-being of each other and the development of our local, regional, and global communities.

Social Justice:

- We have the right to be treated and the responsibility to treat others with fairness and equity, the duty to challenge prejudice, and to uphold the laws, policies and procedures that promote justice in all respects.

Mental Health:

Need Help?

CSU is a community that cares for you. If you are struggling with drugs or alcohol and/or experiencing depression, anxiety, overwhelming stress or thoughts of hurting yourself or others please know there is help available. Counseling Services has trained professionals who can help. Contact 970.491.6053 or go to <http://health.colostate.edu>. If you are concerned about a friend or peer, tell someone at by calling 970.491.1350 to discuss your concerns with a professional who can discreetly connect the distressed individual with the proper resources (<http://supportandsafety.colostate.edu/tellsomeone>). Rams take care of Rams. Reach out and ask for help if you or someone you know is having a difficult time.

Sexual Assault and Violence Elimination

CSU's Student Sexual Harassment and Violence policy, following national guidance from the Office of Civil Rights, requires that professors follow CSU policy as a "mandatory reporter" of any personal disclosure of sexual harassment, abuse, and/or violence related experiences or incidents shared with the professor in person, via email, and/or in classroom papers or homework exercises. These disclosures include but are not limited to reports of personal relational abuse, relational/domestic violence, and stalking. While professors are often able to help students locate appropriate channels of assistance on campus (e.g., see the CSU Health Network link below), disclosure by the student to the professor requires that the professor inform appropriate CSU channels to help ensure that the student's safety and welfare is being addressed, even if the student requests that the disclosure not be shared.

For counseling support and assistance, please see The CSU HEALTH NETWORK, which includes a variety of counseling services that can be accessed at: <http://www.health.colostate.edu/>. And, The Sexual Assault Victim Assistance Team is a confidential resource for students that does not have a reporting requirement and that can be of great help to students who have experienced sexual assault. The web address is <http://www.wgac.colostate.edu/need-help-support>.