

**TMGT 335**  
**Technology and International Development**  
**Myers Technology Center Room 111**  
**Monday 7:30 – 9:30 p.m.**

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**Office Hours: Monday 1:00 – 5:30 p.m.,**  
**Tuesday & Wednesday 10:00 – 11:00 a.m. & 1:00 – 3:00 p.m.**  
**Other times by appointment**

**Blackboard Site is accessible via the portal at MY ISU or**  
**<http://blackboard.indstate.edu>**

**Required Textbook:**

World Watch Institute (2008). *2008 State of the World: Innovations for a Sustainable Economy*. New York: W.W. Norton & Co.

**The Big Picture - The Course**

This course serves as a Global Perspectives and Cultural Diversity Foundational Studies 2010 course (and remains a GE 2000 MCS: IC course) and as such must meet certain objectives. For the Global Perspectives and Cultural Diversity (GP&CDLO) they are:

1. Demonstrate knowledge of cultures and worldviews;
2. Identify social, economic, political, and environmental inter-relationships between cultures and worldviews;
3. Use multiple lenses such as race and ethnicity, gender, social class, regional culture, and religion to evaluate one's culture in comparison to those studied; and
4. Articulate how the social construction of culture and worldviews shapes contemporary social and political issues.

Because this course is part of the larger Foundational Studies Program, it is important to place its goals within the context of the program's goals. By the conclusion of your Foundational Studies Program at ISU, you will be able to (FSLO):

1. Locate, critically read, and evaluate information to solve problems;
2. Critically evaluate the ideas of others;
3. Apply knowledge and skills within and across the fundamental ways of knowing (natural sciences, social and behavioral sciences, arts and humanities, mathematics, and history);

4. Demonstrate an appreciation of human expression through literature and fine and performing arts;
5. Demonstrate the skills for effective citizenship and stewardship;
6. Demonstrate an understanding of diverse cultures within and across societies;
7. Demonstrate the skills to place their current and local experience in a global, cultural, and historical context;
8. Demonstrate an understanding of the ethical implications of decisions and actions;
9. Apply principles of physical and emotional health to wellness;
10. Express themselves effectively, professionally, and persuasively both orally and in writing.

The program is also designed to build skills for applied learning. These Skill and Applied Learning Objectives (S&ALO) require that the course contribute to:

1. Explicitly demonstrate how the curriculum will develop critical thinking skills;
2. Explicitly demonstrate how the curriculum will develop information literacy skills;
3. Include a graded writing component, which whenever possible is developmental.

This course will directly address all of the Global Perspectives and Cultural Diversity Learning Objectives, all of the Skill and Applied Learning Objectives, and all but one of the overall Foundational Studies goals (number 4). Specifically, you will be required to:

1. Identify technology's impact on cultural values and global mind-sets;
2. Describe skills that are vital in dealing with global diversity and cultural variety;
3. Define technology's impact on the development of world societies and cultures;
4. Identify the issues that may affect development through technology in other countries;
5. Demonstrate core concepts of development assistance and of rural participatory development efforts;
6. Describe technology transfer and what implication it might have on global societies;
7. Define how modern technologies interface with various cultures;
8. Identify how various cultures demonstrate resistance to change in technology.

Broadly speaking these objectives require that the course expose you to the methods and uses of Global Perspectives and Cultural Diversity in a way that gives you an understanding of the way the world works. Because this is a technology and international development course, you will acquire that understanding through that particular lens (a focused perspective).

### **Catalog Description**

This course is the study of technological development in an international arena. Emphasis will be placed upon the impact of technology on world societies. Technology transfer and its implication in those societies will be explored. How modern technologies interface with various cultures, and resistance to change will also be examined.

### **Course Goal**

The goal of this course is to prepare students to work in a global society. They will be able to explain how technology affects development in the international arena as well as how technology impacts the development of world cultures.

### **Class Policies**

Students are to complete all assigned text readings, web-based lecture notes, and assignments during the semester.

### **Participation points**

**Internet students** must complete the assignments after reading the assigned textbook chapters and lessons, then contribute to the class discussion board, blogs, or wikis when directed to do so.

**In-class students** are expected to read the assigned textbook chapters and lessons, participate during the class sessions and contribute to the class discussion board, blogs, or wikis when directed to do so.

### **Class Attendance**

In-class students are expected to attend class each week. The course will be taught in seminar fashion and students should be prepared to discuss course material and ideas at each class session.

### **Citation Style**

All papers should be double-spaced, typed, and formatted in APA style (there is an external link to APA style on the class website). All assignments must either be in the Instructor's possession or postmarked by the due date. All sources used in your academic writing must be both cited and referenced properly. Papers may be mailed to the Instructor as a hard copy, deposited in the student drop box on the website, or sent as an email attachment.

### **Student Evaluation**

Final grades will be based upon:

International Project Paper	15%
Mid-Term Exam	15%
Experiential Paper	15%
Topical Paper	15%
Group Presentation	15%
Final Exam	15%
Participation	10%

Assignment sheets will be posted for all major papers for all students under Assignments. Weekly assignments for Internet students will also be posted under Assignments. The mid-term exam will cover all material in class readings, lectures, and discussions through Lesson 7. The final exam will cover all material from Lesson 7 through Lesson 14. The midterm exam and final exam will consist of fill-in-the blank, multiple choice, true or false and essay questions or case studies.

### **Incomplete Grades:**

An incomplete grade (IN) may be given only at the end of a semester to those students whose work is passing but who have left unfinished a small amount of work - for instance, a final examination, a paper, or a term project which may be completed without further class attendance. This policy can be viewed at:  
<http://www.indstate.edu/acad-aff/undergrad/1/1f.pdf>

### **Academic dishonesty:**

Cheating and plagiarism are types of academic dishonesty, and thus violate the ISU code of conduct. The Student Handbook describes the possible sanctions for academic dishonesty in the Policies and Procedures section. To avoid plagiarism problems and to conform to academic standards, students are expected to cite the source anytime one refers to ideas that are not their own. Follow the APA guidelines when citing and referencing sources. The university student code of conduct stipulates appropriate action for academic dishonesty and this will apply to this class. For a tutorial on plagiarism visit:  
<http://panther.indstate.edu/tutorials/plagiarism/defined1.html>

### **Major Assignments**

***International Interview Project Paper*** – The student will schedule and complete a meeting of at least two hours or more with an international person (a person from a different country other than the United States, Canada, or country of their origin). This person should not be ‘Americanized’, meaning they should have been in the United States less than five years. The student will conduct research about the international person’s country prior to their meeting. They will address fourteen specified areas ( geographic location, culture and customs, how basic needs are met, political structures, travel and transportation, types of buildings, religion/s, types of food in their diets, media in their country, cultural differences related to the expected roles of men and women, technology and development, education available, and infrastructure) in their interview and write a summary paper on it. The student will articulate how the social construction of culture and worldviews shape contemporary social and political issues. The student will gain awareness and skills in dealing with global diversity and cultural variety while developing an understanding of technology’s impact on the development of world societies and cultures. This will address FS learning objectives 2, 6, 7, and 10. This will address the global/cultural learning objectives 1, 2, 3, and 4. This will also demonstrate experiential learning and Skilled and Applied Learning Objectives 1, 2, & 3.

***Experiential Project Assignment*** – Within International Development we discuss the culture within different countries. However, within each country there are also sub-cultures within cultures. The student will schedule and complete a volunteer experience

at a charitable organization for a minimum of two hours. They will write a paper about their experience and specifically address eight areas: mission of the organization; number of people served per year; funding sources; and identify the race, ethnicity, gender, social class, and culture of the people utilizing the organization. They will then explain how their experience relates to what they have learned in the classroom and more specifically which lesson. This will assist the student to develop an understanding of how technology impacts different cultures and sub-cultures within a society. This will address FS learning objectives 1, 3, 5, 8 and 9, as well as the global/cultural learning objectives 1, 2, 3, and 4. This assignment will also demonstrate experiential learning, community engagement, and Skilled and Applied Learning Objectives 1, 2, & 3.

**Topical Paper Assignment** – The student will write a paper about a topic that makes clear some aspect of Technology and International Development. The paper will do one or more of the following:

- Appear in the book State of the World 2008 or be related to the lessons discussed in class.
- Be related to a developing country, have an International context, or a world environmental concern.
- Be concerned with the use of technology to further international development in some aspect.

The student will give their own viewpoint in the conclusion about whether they agree/disagree with the topic being presented and why/why not. This assignment will address Foundational Learning Objectives 1, 2, 3, 6 and 8; the global/cultural learning objectives 1, 2, 3, and 4; and skill applied learning requirements 1, 2, and 3.

**Group Projects** – The class will be divided into four different groups (in-class and Internet students). Each group will elect two group leaders. The group leaders will survey their group for the best time and day to have an online chat to decide the topic for their group project, name for the group, and each member will volunteer for a specific part of the project and prepare 2-3 power point slides with bulleted note pages over their research. The group leaders are then responsible for putting the presentation together; it will be presented in the classroom by all students in the group who live within the area. Topics for the group projects can be anything that has been discussed in class throughout the semester dealing with technology and international development. This assignment will address Foundational Learning Objectives 1, 2, 3, 5, 6, 7, 8 and 10; the global/cultural learning objectives 1, 2, 3, and 4; and Skilled and Applied Learning Objectives 1, 2, & 3.

### **Grading Scale**

95-100	A
93-94	A-
91-92	B+
89-92	B+
85-90	B
83-84	B-
81-82	C+

75-80 C  
 73-74 C-  
 69-72 D+  
 65-68 D  
 63-64 D-  
 62&dn. F

**PDA's, Cell phone, and all other electronic devices must be set to vibrate or turned off and put away during class time.**

## ***"The Sycamore Standard"***

### **Indiana State University**

Students at Indiana State University are expected to accept certain personal responsibilities that constitute the "standard" for behavior in a community of scholars. As a student at Indiana State University:

I will practice personal and academic integrity; I will commit my energies to the pursuit of truth, learning, and scholarship; I will foster an environment conducive to the personal and academic accomplishment of all students; I will avoid activities that promote bigotry or intolerance; I will choose associations and define my relationships with others based on respect for individual rights and human dignity; I will conduct my life as a student in a manner that brings honor to me and to the University Community; I will discourage actions or behaviors by others that are contrary to these standards.

Adopted by the Indiana State University Student Government Association April 17, 2002

### **AMERICAN WITH DISABILITES ACT STATEMENT**

"Indiana State University seeks to provide effective services and accommodation for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, you are required to register with Disability Support Services at the beginning of the semester. Contact the Director of Student Support Services. The telephone number is 237-2301 and the office is located in Gillum Hall, Room 202A. The Director will ensure that you receive all the additional help that Indiana State offers.

If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classrooms."

### **Laptop Usage**

Laptop Not Required for Course: Usage Permitted: While there will be no assignments or examinations for which the laptop will be used, your use of a laptop is generally permitted as long as such usage remains within the bounds of the Code of Student Conduct and it conforms to the provisions of its use as laid out in this syllabus. There may be occasions where laptop usage is forbidden and if that occurs, failure to comply with this direction will be viewed as a violation of the Code of Student Conduct.

### **Academic Freedom**

"Teachers are entitled to freedom in the classroom in discussing their subject, but they should be careful not to introduce into their teaching controversial matter which has no relation to their subject."

The preceding comes from the American Association of University Professors statement on academic freedom. Though the entire statement speaks to many issues, it is this portion on the conduct of the course that is most relevant. For the purpose of Foundational Studies courses this means that faculty have the right to conduct their class in a fashion they deem appropriate as long as the material presented meets the learning objectives laid out by the entire faculty.

<http://www.aaup.org/AAUP/pubsres/policydocs/contents/1940statement.htm>

**The Instructor reserves the right to make changes to the course if necessary.**

**Feel Free to contact the professor at any time if you have questions concerning this course. Best regards as we journey through this learning experience.**

### Schedule

August	31	Syllabus Lesson 1 Understanding Technology, Poverty, and Development Assignment #1
September	7	No Class – Labor Day
	14	Lesson 2 and Chapter 1 in the Textbook – Seeding the Sustainable Economy Assignment #2
	21	Lesson 3 and Chapter 2 in the Textbook – A New Bottom Line for Progress Assignment #3
	28	Lesson 4 and Chapter 3 in the Textbook – Rethinking Production Assignment #4 International Interview Project Due
October	5	Lesson 5 and Chapter 4 in the Textbook – The Challenge of Sustainable Lifestyles
	12	Guest Speaker Midterm Exam
	19	Lesson 6 and Chapter 5 in the Textbook – Meat and Seafood: The Global Diet’s Most Costly Ingredients Assignment #6
November	26	Lesson 7 and Chapters 6 & 7 in the Textbook – Building a Low-Carbon Economy & Improving Carbon Markets Assignment #7
	2	Lesson 8 and Chapter 8 in the Textbook – Water in a Sustainable Economy Assignment #8 Experiential Project Paper Due
	9	Lesson 9 and Chapters 9 & 10 in the Textbook – Banking on Biodiversity & The Parallel Economy of the Commons Assignment #9
	16	Lesson 10 and Chapter 11 in the Textbook – Engaging Communities for a Sustainable World Assignment #10
	23	Lesson 11 and Chapter 12 in the Textbook – Mobilizing Human Energy Assignment #11 Topical Paper Due
	30	Lesson 12 and Chapters 13 & 14 in the Textbook – Investing for Sustainability & New Approaches to Trade Governance Assignment #12
December	7	Group Projects – All groups will present their group projects in class.
	14	Final Exam

## Annotated Schedule

Month	Day	TOPIC	Expanded Description of Topic & Pedagogy	Learning Objective
Aug.	31	<b>Syllabus Overview of the course. Lesson 1 on Blackboard Assignment #1</b>	The syllabus is explained in great detail with a cautionary note as to the grading scale. References to Blackboard are made and access to the Power Point lessons and assignments are demonstrated. Technology and International Development are discussed along with cultures, customs, religions, and political systems and how they affect both technology and development. Students will identify and discuss how cultures, customs, religions, and political systems affect technology and international development.	FSLO 1,6,7,8 GP&CDLO 1,2,3,4 S&ALO 1
Sep.	7	<b>LABOR DAY</b>	No Assignments – No Class	
	14	<b>Lesson 2 Blackboard &amp; Chapter 1 Seeding the Sustainable Economy Assignment #2</b>	Sustainable economies are discussed at length with several examples given. What is sustainability is discussed thoroughly with examples given by students. The term “ecological footprint” is presented and discussed. How does the ecological footprint affect all social classes in different regions of the U.S. and other countries?	FSLO 1, 2, 3,6 GP&CDLO 1,2,3,4 S&ALO 1,3
	21	<b>Lesson 3 Blackboard &amp; Chapter 2 A New Bottom Line for Progress Assignment #3</b>	The way societies have defined and measured progress has had a profound influence on world history. Economic globalization and genuine progress, is this a growing disparity? What are the market forces fostering the use of sustainable development? Examples are given, and students are asked to give examples of various social classes and regional cultures both in the U.S. and abroad.	FSLO 1,6,7,8 GP&CDLO 1,2,3,4 S&ALO 1,3
	28	<b>Lesson 4 Blackboard &amp; Chapter 3 Rethinking Production Assignment #4 International Interview Project Due</b>	Every year the world digs up, puts through various resource crunching processes, and then throws away over a half-trillion tons of stuff. U.N. Secretary-General Kofi Annan observed that the very basis for life on earth is declining at an alarming rate. What can we do to slow this down? Students will discuss their ideas to slow this decline and identify how this would be effective across various cultures.	FSLO 1,2,3,5,7,8, 10 GP&CDLO 1,2,3,4 S&ALO 1,3
Oct	5	<b>Lesson 5 Blackboard &amp; Chapter 4 The Challenge of Sustainable Lifestyles Assignment #5</b>	How can a world of finite resources and fragile environmental constraints possibly support the expectations of 9 billion people in 2050 to live the lifestyle exemplified for so long by the affluent West? This is the challenge for the future in all societies. Students will discuss how, as a world society, we can change the way we live and identify strategies that might work effectively for all social classes and regional cultures.	FSLO 1,2,5,6,7,8 GP&CDLO 1,2,3,4 S&ALO 1,3
	12	<b>Guest Speaker</b>	<b>All students: Mid-term Exam</b>	

	19	<b>Lesson 6 Blackboard &amp; Chapter 5 Meat &amp; Seafood: The Global Diet's Most Costly Ingredients Assignment #6</b>	Meat and seafood are the two most rapidly growing ingredients in the global diet. Yet in terms of resource use, these are also two of the most costly. What are some of the changing production methods for producing them? Do we need to eat lower on the food chain? Students will discuss ideas and identify ways to change the way the world eats and ways to change production of meat and seafood. The student will compare/contrast the U.S. to other selected countries.	FSLO 1,2,5,6,7,8 GP&CDLO 1,2,3,4 S&ALO 1
	26	<b>Lesson 7 Blackboard &amp; Chapters 6 &amp; 7 Building a Low-Carbon Economy Improving Carbon Markets Assignment #7</b>	Humanity is at risk of creating a climate unlike any seen before. In 2007, the atmospheric concentration of CO <sub>2</sub> passed 382 parts per million. Regions, countries, and states are setting limits or caps on the amount of greenhouse gas that can be emitted each year. Students will discuss how carbon emissions affect the world and identify ways to reduce our carbon emissions from a global standpoint.	FSLO 1,2,5,6,7,8, GP&CDLO 1,2,3,4 S&ALO 1
Nov	2	<b>Lesson 8 Blackboard &amp; Chapter 8 Water in a Sustainable Economy Assignment #8 Experiential Project Paper</b>	Water is as essential to economies as it is to human life. It is also essential to sustain ecosystems and must be recognized for its value as an environmental resource that underpins economies and societies. Students will discuss and identify water management and innovations in technology that will globally manage water more efficiently, productively, and sustainably. The student will compare/contrast the use of water in the U.S. to developing countries.	FSLO 1,2,3,5,6,7, 8,9,10 GP&CDLO 1,2,3,4 S&ALO 1,2,3
	9	<b>Lesson 9 Blackboard Chapters 9&amp;10 Banking on Biodiversity The Parallel Economy of the Commons Assignment #9</b>	The world is losing species and ecosystems because the economic system has a blind spot. Is building a shopping mall to sell iPods more valuable than having a wetland that buffers coasts against storms, filters water, and provides nesting ground for birds? Case studies will be presented on different species with the students identifying ways in which to preserve biodiversity. Common property is neither public nor private in the usual sense; does common property exist in today's world society? Students will identify and discuss ecosystems, biodiversity, and common property management.	FSLO 1,2,3,5,6,7, 8 GP&CDLO 1,2,3,4 S&ALO 1
	16	<b>Lesson 10 Blackboard Chapter 11 Engaging Communities for a Sustainable World Assignment #10</b>	Eco-villages and community gardens will be presented and discussed. Sharing within a community helps to establish a different cultural norm, one based on cooperation instead of conspicuous consumption and competition. Students will identify and discuss how eco-villages and community gardens can assist in sustainability for the world.	FSLO 1,2,5,6,7,8 GP&CDLO 1,2,3,4 S&ALO 1

Nov.	23	<b>Lesson 11 Blackboard Chapter 12 Mobilizing Human Energy  Assignment #11 Topical Paper</b>	The greatest untapped resource in solving the problem of global poverty and environmental decline is the poor themselves. In the face of deprivation, discrimination, and oppression, the poor are all too often offered charity, manipulation, and condescension. How do we reshape the development agenda? Students will identify and discuss programs that have been successful in international development. The students will identify if these successes were due to the social construction of culture and worldviews.	FSLO 1,2,3,5,6,7, 8,9,10 GP&CDLO 1,2,3,4 S&ALO 1,2,3
	30	<b>Lesson 12 Blackboard Chapters 13 &amp; 14 Investing for Sustainability &amp; New Approaches to Trade Governance Assignment #12</b>	In the past few years, some corporations have been integrating sustainability factors into its traditional financial analysis. Investing for sustainability is an umbrella term used for the various forms of investment that promote sustainability. International trade and whether it is a help or hindrance and the World Trade Organization and its role will be identified and discussed. Students will identify sustainable investing approaches and multidimensional problems with trade governance in a global society.	FSLO 1,2,5,6,7,8 GP&CDLO 1,2,3,4 S&ALO 1
Dec	7	<b>Group Projects</b>	<b>All groups will present their group projects in class.</b>	FSLO 1,2,3,5,6,7, 8,9,10 GP&CDLO 1,2,3,4 S&ALO 1,2,3
	14	<b>Final Exam</b>	<b>All Students</b>	<b>Final Exam</b>

## Issues Annotation

Issue	Expanded Description of Topic & Pedagogy	Learning Objective
Technology International Development Expected/unexpected Impacts of Technology Upon Society	Lesson 1 – this lesson illustrates the many facets of technology and if technology is always successful. Development within the international context is explained taking into consideration the culture, customs, religion, financial systems, and political systems of each country. Expected and unexpected impacts of technology upon society will be discussed.	FSLO S&ALO GP&CDLO
Sustainable Economies Ballooning Liabilities Conceptual Reform in Key Sectors Innovation Revolutionaries	Lesson 2 & Chapter 1 – Seeding the Sustainable Economy. Definitions of sustainable economies are given. Humanity’s impact on the planet and its “ecological footprint” is discussed. The ballooning liabilities of climate change, ecosystem degradation, and wealth inequality are presented with a plan for conceptual reform in key sectors from growth to development. Some analysts believe the innovations fueling sustainable economies are spawning the sixth major wave of industrial innovation.	FSLO S&ALO GP&CDLO
Economic Globalization and Genuine Progress Sustainable Development Indicators	Lesson 3 & Chapter 2 – A New Bottom Line for Progress. This chapter discusses economic globalization and whether it is genuine progress or a growing disparity. Sustainable development practices are presented along with tables for sustainable development objectives and indicators. It concludes with ideas to move toward more sustainable development practices.	FSLO S&ALO GP&CDLO
The Solid Foundation of Eco-efficiency Cradle to Cradle Following Nature’s Lead Riding the New Wave of Innovation	Lesson 4 & Chapter 3 – Rethinking Production. This chapter discusses how we presently produce items throughout the world and whether we should redesign how we make all products using such approaches as biomimicry and cradle to cradle. The concept of making things using fewer resources is the cornerstone in producing goods and services that are more sustainable, but how is this done? Companies are implementing eco-efficiency to drive their innovation and enhance their competitiveness. Business success in a time of technological transformation demands innovation using various sustainable technologies.	FSLO S&ALO GP&CDLO
The Math of Sustainability The Science of Desire The Paradox of Well- being The Iron Cage of Consumerism	Lesson 5 & Chapter 4 – The Challenge of Sustainable Lifestyles. This chapter presents a case study of two couples who live in Mumbai and the difference in their sustainable lifestyles. The math of sustainability is explained. Does increasing consumption lead to improved well-being? This is referred to as the Science of Desire. We will take a close look at what motivates consumers and their correlation with reported happiness, or the Paradox of Well-being. An	FSLO S&ALO GP&CDLO

	<p>important lesson from evolutionary psychology is that the balance between selfish and cooperative behaviors depends critically on the kind of society they occur in; we will discuss the Iron Cage of Consumerism. This chapter concludes with the thought that a sustainable world is not an impoverished world, but one that is prosperous in different ways; the challenge for the 21<sup>st</sup> century is to create that world.</p>	
<p>Changing Production Methods Going Back to Nature A Change in Incentives Embracing the Ethical Moving Down the Industrial Food Chain</p>	<p>Lesson 6 &amp; Chapter 5 – Meat and Seafood: The Global Diet’s Most Costly Ingredients. Industrial meat production increased in the early 20<sup>th</sup> century with a series of changes in breeding, farm structure, and the rise of corporate agribusiness. Today, there are emerging concerns about the food sources of meat and seafood, including avian flu and other new diseases, and outright depletion and contamination of seafood. Outside Manila, innovative farmers have learned from the centuries-long practice of raising livestock and fish together. In both farming and fishing, subsidy reform does not have to mean fewer jobs and less food. Governmental policymakers can shift policy and enact regulations on food, but it is consumers and big buyers who can rapidly reshape the market. Consumers need to rethink their relationship with meat and seafood in order to keep them on the menus in fine restaurants, as well as on the plates of people in the developing world.</p>	<p>FSLO S&amp;ALO GP&amp;CDLO</p>
<p>Global Energy Use &amp; Carbon Emissions What about nuclear power? Available Energy Resources Using Today’s Technology Designs for a New Energy Economy North American Carbon Trading Systems The Kyoto Mechanisms in Action The Future of Carbon Markets</p>	<p>Lesson 7 &amp; Chapters 6 &amp; 7 - Building a Low-Carbon Economy and Improving Carbon Markets. Building a low-carbon economy will require restructuring the global energy industry through technological, economic, and policy innovations. Nuclear power is a largely carbon-free energy source that could, in theory, help phase out fossil fuels. Some of the alternative energy sources with today’s technology are solar, wind, geothermal, biomass, hydropower, and the ocean. The design for the widespread adoption of renewable energy sources will need to fit into an energy system that was designed around fossil fuels. In financial capitals across the world, brokers are hard at work trading a key commodity of the 21<sup>st</sup> century: carbon credits. North American Carbon Trading Systems have been under development since 2005. The Kyoto Protocol’s flexibility mechanisms link countries that have a shared interest in creating projects to reduce greenhouse gas emissions – harnessing industrial countries’ interest in investing in lower-cost efficiency projects overseas and pairing that with developing countries’ interest in receiving financing and cleaner technologies. Carbon markets will be a significant feature of the global economic landscape in the years and decades ahead.</p>	<p>FSLO S&amp;ALO GP&amp;CDLO</p>
<p>Water in Today’s Economy Valuing Water for Sustainability Innovations That Turn the</p>	<p>Lesson 8 &amp; Chapter 8 – Water in a Sustainable Economy – As agriculture, industry, and households vie for ever larger shares of water, ecosystems risk being the greatest losers. Fifty years ago sustainability was simply not a part of the vocabulary, and water was</p>	<p>FSLO S&amp;ALO GP&amp;CDLO</p>

Tide The Dublin Principles	not a particular consideration for economists. Integrated water resources management is now a universal aspiration, albeit one that is quite challenging to implement. The four Dublin Principles concerning water are presented.	
The Problem of Biodiversity Loss Wetland Mitigation Banking Endangered Species: From Liabilities to Assets Government Programs How Much is Nature Worth?	Lesson 9 & Chapters 9 & 10 – Banking on Biodiversity and The Parallel Economy of the Commons. The loss of biodiversity is tremendous and disturbing, and it continues to grow at an exponential rate. Although wetland mitigation banking has proven to be a rather innovative concept, fueling the growth of a new “nature management industry”, it is important to point out that it is by no means perfect. Under the conservation banking system, landowners with an endangered species on their land can get a permit to harm that species if they can show they have compensated for it by creating habitat for that same species somewhere else. Private landowners in Costa Rica who protect their forest cover receive a payment from the National Forestry Fund. The answer to how much is nature worth to society will in large measure determine whether humanity ends up living in a world of whales, wild tigers, and wetlands or a world of pavement, iPods, and pollution.	FSLO S&ALO GP&CDLO
Modeling Sustainability Cultivating Community Connections Localizing Economic Production Financing Sustainable Communities Communities Mobilizing Society	Lesson 10 & Chapter 11 - Engaging Communities for a Sustainable World. A community manifests its values through its physical design; local gardens, solar panels on rooftops, and wind turbines spinning on a hilltop are typical signs of an ecologically minded community. Sharing within a community also helps to establish a different cultural norm, one based in cooperation instead of conspicuous consumption and competition. A bakery in the eco-village of Lakabe near Pamplona, Spain, baked bread for 25 stores in surrounding towns; throughout the world there are countless local businesses employing people from the community. Underlying local economic enterprise there needs to be sustainable community finance, which can mobilize community funds to invest in local green endeavors. Eco-municipalities are efforts by community members, local NGOs, and town officials to create long-term comprehensive sustainability plans for towns, villages, or cities.	FSLO S&ALO GP&CDLO
Grounding Action in Local Realities Reshaping the Development Agenda in the 1990s The Unlimited Resource Scaling up Local Successes Overcoming Obstacles	Lesson 11 & Chapter 12 - Mobilizing Human Energy. Because of the several encouraging developments in the 1990s, there are signs that thinking in international development policy circles is converging around several sensible propositions that could reorient the global poverty fight. The United Nations sponsored a succession of international conferences on the environment, population, food security, social development, women, and housing that shaped a broad international consensus on fighting poverty. Increasing poor people’s freedom of choice and action to shape their own lives is critical to achieving	FSLO S&ALO GP&CDLO

	<p>development outcomes because it taps into their natural energy and incentive. One of the greatest challenges for development organizations is taking a success that is working locally and translating it to the regional or national level. Reforms are needed in the global development architecture of trade, aid, investment, migration, security, and rich-country environmental policies.</p>	
<p>Socially Responsible Investing Shareowner Activism Project Finance and the Equator Principles Importing Sustainability to China Current Obstacles to Investing in Sustainability International Trade Goals of the Multilateral Trading System Foundations of the WTO Governance Crisis The Challenge of Respecting WTO Goals Accepting that the World Has Changed</p>	<p>Lesson 12 &amp; Chapters 13 &amp; 14 – New Approaches to Trade Governance &amp; Investing for Sustainability. Four decades ago the foundations of sustainable investing were established with the advent of modern socially responsible investing, which broke new ground by marrying social and environmental considerations with traditional financial considerations. Shareowner activism is as old as share-ownership. The Dutch East India Company was the first enterprise ever to be listed on a stock exchange in 1602. The funding of major infrastructure projects such as dams, oil wells, pipelines, and mines is one of the most significant investment strategies driving a top-down integration of sustainability principles. Although China has huge negative social and environmental impacts through exporting, it has the opportunity to integrate sustainability into its burgeoning finance sector. Investors, activists, and government watchdogs alike served notice to the SEC that disclosure of environmental and social risks was not optional but mandatory. Trade contributes to peace by building both mutual dependence and a better understanding of the trading partner's character, culture, and motivations. The goal of the multilateral, rules-based trading system managed by the WTO is to harness trade to the task of achieving sustainable development, insuring that trade openness provides a boost to development in the less-advanced countries, and recognizing the distinct needs of countries at different stages of development. Designing the right institutions for global economic governance will mean rethinking the role and primacy of the nation-state as traditionally understood.</p>	<p>FSLO S&amp;ALO GP&amp;CDLO</p>

## Annotated Assessments

Assessment	Question(s) Asked	Pedagogical Point of the Question(s)
Assignment #1	Write a one page summary of what technology and international development encompasses	Introduce students to summarizing key concepts of lectures/lessons.
Assignment #2	Read about the “ecological footprint” in chapter 1 of the textbook, then look it up on the Internet. Write a two page report explaining the term, how to measure one’s “ecological footprint”, and present what your footprint is, and the footprint of the United States.	To have students locate, critically read, and evaluate information to solve the problem of their “ecological footprint”.
Assignment #3	Post to the discussion board what the Gross Domestic Product (GDP) and the Genuine Progress Indicator (GPI) are, how they differ, and which would best serve development for sustainability.	To help students understand that indicators for sustainability may not be the same as for economic progress. This assists the students in expanding their critical thinking skills.
Assignment #4	In a one page paper describe what the term “cradle to cradle” means and give an example.	To have students solidify the basic idea of extending a product’s life.
Assignment #5	Define the term “sustainable lifestyles” and give at least two examples of these in a two page paper.	To have students recognize that sustainable lifestyles may be different from what they have been subjected to and that these are environmentally friendly lifestyles.
Assignment #6 International Interview Project	Answer the question, how can we change the production of meat and seafood? Use the concept “From farm to factory to farm”. Interview an International person and ascertain the geographical location of their country, transportation, housing, technology, education, culture, customs, employment, religion, media, and expected roles of men & women. Research this same information on the Internet and compare/contrast the information from both sources in a 3-5 page paper.	To have students investigate how we can change the production of our meat supply to become more sustainable.  To have students learn one-on-one about another country and through research, then do a comparison/contrast of the two.
Assignment #7	What is the Clean Development Mechanism (CDM) and how is it used? What is the expected distribution of CDM credits for 2010-2012? Write a one page paper to answer each question.	To have students be able to identify how carbon emissions affect the world and how carbon markets work.
Midterm Exam	Chapters 1 through 7	
Assignment #8	What are the Dublin Principles and should they apply to the rest of the world? Answer should be a 1-2 page paper.	To have students understand the value and scarcity of water and present ideas to conserve and use it wisely.

Assignment #9	What is biodiversity and how does it affect the world? Describe wetland banking. Post your answers to the class wiki.	To make students aware of biodiversity and its effects on the world as a whole, and to understand wetland banking.
Assignment #10 Experiential Project Paper	What does the term “from community to conservation” mean? What is commons management? Answer these in a 1 page paper. Each student will volunteer for a minimum of 2 hours at a charitable organization and write about their experience and relate it to the class material.	To have students understand that conservation should be a part of every community and some communities can employ commons management. To have students understand how technology impacts different cultures and sub-cultures within a society.
Assignment #11	What is the Los Angeles Eco-village (LAEV)? Describe at least two other eco-villages in the world. How can we reshape the development agenda? Answers should be in a 2 page paper.	To have students identify sustainable communities and understand why they are sustainable. To identify how international development can be improved.
Assignment #12 Topical Paper Assignment	What is socially responsible investing? What did Mark Halle mean by “good governance” in chapter 14? Answers should be posted to the class blog. Topical paper should encompass some aspect of technology and international development.	To have students understand and know the difference between forms of investment that promote sustainability and those that do not. To have the student understand the mechanisms of good governance. To have the student identify how technology has an impact upon International development.
Group Projects	Groups will select a topic on some form of technology and international development and give a thorough presentation over it using Power Point.	To have students experience teamwork to design, develop, and implement an oral and visual presentation over a topic of technology and international development.
Final Exam	Chapters 8 through 14	

**Course Narrative**  
**For TMGT 335 – Technology and International Development**  
**For Foundational Studies Global Perspectives and Cultural Diversity**

As technology has indeed brought the world closer together, it has also created some chasms. Technologies have been introduced to societies that have changed cultures forever. There is not a land mass on the earth that cannot be visited. The depths of the oceans have been challenged, as has space.

Issues such as: What technology is shared with which nation?; What impact will technology have on a particular culture?; What level of technology should a nation be permitted to acquire?; What technology should a nation not be able to develop?; What price is humankind willing to pay for uncontrolled technological growth?; plus many other questions need to be asked and explored.

The proposed course is designed to explore many facets of technology and world development. Issues such as change, social implications, and ethics of technological transfer will be explored. Through related readings and assignments, students will look at technology from more than a user's perspective. Investigating technology's impact on the world should prove to be an enlightening experience, adding much to the breadth of the student's liberal education.

As can be seen from the annotated schedule, almost every topic that is covered in this course hits on each one of the Global Perspectives and Cultural Diversity Objectives. In every class period, the actions of individuals and countries in their use of technology are shown to have some impact on society and nations. As the semester progresses into the issues, the connection between Technology and International Development becomes obvious and whether those impacts are positive or negative. A liberal education should demand of its progeny an understanding of one of the principal forces that drives the world. That understanding should extend beyond mere use, but should investigate the dynamics of that driving force.

At nearly every turn, students are required to critically compare, evaluate, and contrast forms of technology and development and how they affect different cultures. Differences of opinion are explained so that students can use their experiences and insights to judge for themselves the efficacy of various models of development. In the issues in particular, differences in values and ethics leads to differences in how we implement technology and development throughout the world. Students are encouraged to suspend their own preconceived views of the subject matter so as to give other perspectives an opportunity to penetrate.

Through assignments and readings this course will assist the student in understanding that as social, political, and economical climates change in the world, so must policy pertaining to the sharing of technology. The class will look at technology transfer and its effect on various world societies. Students will become familiar with various resources for future research in the field.







