

General Information

Course Bulletin Listing/Subject Area	Comparative Studies
Fiscal Unit/Academic Org	Dept of Comp Stds in Hum - D0518
College/Academic Group	Humanities
Level/Career	Undergraduate
Course Number/Catalog	4597.01
Course Title	Global Studies of Science and Technology
Transcript Abbreviation	Global St:Sci/Tech
Course Description	Explores relations among culture, science, and technology in changing global contexts.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week, 7 Week, 12 Week (May + Summer)
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus, Marion, Newark

Prerequisites and Exclusions

Prerequisites/Corequisites	Completion of GEC second writing course and natural science sequence; or permission of instructor; 367.02 or 2367.02 recommended.
Exclusions	Not open to students with credit for CS 597.01.

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	24.0101
Subsidy Level	Baccalaureate Course
Intended Rank	Junior, Senior

Quarters to Semesters

Quarters to Semesters	Semester equivalent of a quarter course (e.g., a 5 credit hour course under quarters which becomes a 3 credit hour course under semesters)
List the number and title of current course being converted	Replaces 597.01, Global Studies of Science and Technology. Should have global diversity GEC requirement added.

Requirement/Elective Designation

General Education course:

Global Studies (International Issues successors); Cross-Disciplinary Seminar (597 successors and new)

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Students understand political, economic, cultural, social, philosophical differences among nations; analyze categories of race, class, gender, etc., in relation to global/internat'l issues; recognize role of diversity in shaping their own values.

Content Topic List

- Science
- Technology
- Globalization
- Gender
- Race
- Culture
- Science Studies
- Diversity
- Global Studies
- Emergent Technologies
- Technoculture
- Biotechnology and food in the context of globalization
- Bioengineering and food production
- Biotechnology and corporations
- Genetically modified crops and small farmers
- Who reaps economic benefits of biotechnology
- Reproductive technologies
- Reproductive technologies and gender
- Artificial reproductive technologies and romanticism.
- Virtual reality, video games, and social networking
- Social networking and political movements
- Science, technology, and democracy
- Science
- Technology
- Globalization
- Gender
- Race
- Culture

Attachments

- 4597 01 global sci tech syllabus (June 24 2011).docx: sample syllabus
(Syllabus. Owner: Lynd, Margaret Elizabeth)
- 4597_01_GE_rationale_(Aug 4 2011).pdf: Revised GE proposal
(Other Supporting Documentation. Owner: Lynd, Margaret Elizabeth)

Comments

- (Revised GE proposal attached, including assessment plan.) This is a GEC 597 course. Add "Social Diversity/Global Studies: Nonwestern GEC status." Course fulfills these goals without changes. Semester syllabus and GE proposal are attached. *(by Lynd, Margaret Elizabeth on 08/04/2011 03:24 PM)*
- 7/28/11: Feedback from CCI Assessment subcommittee:
 - a. Description of how learning goals are met for global studies are very basic
 - b. Assessment does not address GE learning goals
 - c. Topics do not seem to match the course description

5/18/11: Please submit GE proposal to add new category to this course *(by Meyers, Catherine Anne on 07/28/2011 03:50 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Lynd, Margaret Elizabeth	05/03/2011 04:21 PM	Submitted for Approval
Approved	Holland, Eugene William	05/10/2011 04:49 PM	Unit Approval
Approved	Williams, Valarie Lucille	05/11/2011 11:52 AM	College Approval
Revision Requested	Meyers, Catherine Anne	05/18/2011 09:20 AM	ASCCAO Approval
Submitted	Lynd, Margaret Elizabeth	06/29/2011 01:57 PM	Submitted for Approval
Approved	Holland, Eugene William	07/01/2011 06:47 AM	Unit Approval
Approved	Williams, Valarie Lucille	07/05/2011 07:50 AM	College Approval
Revision Requested	Meyers, Catherine Anne	07/28/2011 03:50 PM	ASCCAO Approval
Submitted	Lynd, Margaret Elizabeth	08/05/2011 03:18 PM	Submitted for Approval
Approved	Lynd, Margaret Elizabeth	08/05/2011 03:26 PM	Unit Approval
Approved	Williams, Valarie Lucille	01/23/2012 01:17 PM	College Approval
Pending Approval	Nolen, Dawn Jenkins, Mary Ellen Bigler Meyers, Catherine Anne Vankeerbergen, Bernadette Chantal Hogle, Danielle Nicole Hanlin, Deborah Kay	01/23/2012 01:17 PM	ASCCAO Approval

Comparative Studies 4597.01

Global Studies of Science and Technology

Semester: Autumn 2012

Instructor:

Office:

Office Hours:

Phone/E-mail:

Meeting Time:

Classroom:

COURSE DESCRIPTION

We will analyze the intersection of values, scientific thought, and technological practice in a global setting. We will examine key concepts used by social theorists and critics to examine the relationship of technology and science to social realities present and future. Throughout the course we will focus on these aspects of science-technology in a global context: biotechnology, reproductive technology, virtual and simulated realities. Through critical analyses of scientific and technological issues we will seek neither to vilify nor glorify scientific-technological practice, but rather understand the emerging social realities these practices make possible and accomplish. Groups will examine specific cultural examples that grapple with these social-technical situations—movies, games, tv shows, etc.

Some key questions we will explore are:

- How do major social and cultural thinkers understand technology and culture in a global context?
- How are scientific and technological practices changing and how are they changing us?
- How are decisions and arguments about the uses and dangers of technology made and how are these decisions justified?
- What are the relationships among the globalization of science, transnational business, conflicts over values, and the conditions of life on this planet?
- How are local, national, and global elite undertakings affected by disparate access to scientific knowledge and technological resources?

GENERAL EDUCATION GOALS AND LEARNING OUTCOMES FOR CROSS-DISCIPLINARY SEMINARS AND GLOBAL STUDIES COURSES:

Cross-disciplinary seminars:

Goal: Students demonstrate an understanding of a topic of interest through scholarly activities that draw upon multiple disciplines and through their interactions with students from different majors.

Learning Outcomes:

1. Students understand the benefits and limitations of different disciplinary perspectives.
2. Students understand the benefits of synthesizing multiple disciplinary perspectives.
3. Students synthesize and apply knowledge from diverse disciplines to a topic of interest.

Global Studies Courses:

Goal: International Issues coursework help students become educated, productive, and principled citizens of their nation in an increasingly globalized world.

Expected Learning Outcomes:

1. Students exhibit an understanding of some combination of political, economic, cultural, physical, social, and philosophical differences in or among the world's nations, peoples and cultures outside the U.S.

2. Students are able to describe, analyze and critically evaluate the roles of categories such as race, gender, class, ethnicity, national origin and religion as they relate to international/global institutions, issues, cultures and citizenship.
3. Students recognize the role of national and international diversity in shaping their own attitudes and values as global citizens.

REQUIRED TEXTS (available at SBX)

Technoculture: The Key Concepts, ed., Debra Benita Shaw

All other required readings will be available on Carmen in PDF format or web-based.

REQUIREMENTS

IN-CLASS: In order to foster class participation, regular attendance, and accountability for assigned readings, in addition to discussion, short in-class writings and occasional short quizzes--neither extensive, nor time-consuming (5-10 mins)—will be assigned. You will be rewarded for your attention to the readings and your attendance. If you need any special accommodations, please let me know at the beginning of the term. In-class writing assignments/quizzes will relate to that day's assigned reading.

After two missed classes, your participation grade will begin to be negatively affected.

GROUP TAUGHT CLASS: Each group will be responsible for leading a class (for approx. 45 mins) about technology and global issues. The group will present a cultural artifact (movie, game, tv show, etc.) using the key concepts in *Technoculture*. You will be applying the ideas and theories described by Shaw to illuminate your "object" (e.g. *Second Life*, *Avatar*, *RepoMen*, facebook, Ipod/smartphones, military drones, Internet, prosthetics, surveillance technologies, data mining, virtual border guards, MPGs). Topics not open are those we are covering as a class—Bioengineered Plants, Artificial Reproductive Technologies and Twitter).

In most cases all members of the group will receive the same grade. If this is not the case, I will discuss the matter with the group or individual in consultation with the group. This assignment requires cooperation, planning, and work. Any complaints about individual group members will be handled at my discretion. **Please bring any problems in your group to my attention quickly.**

OUTSIDE OF CLASS:

Midterm

You will write a 5-page take-home exam responding to assigned topics/questions in brief essays and short answers (key terms/thinkers) covering materials and ideas from **across** the first 4 weeks of the course. To answer these questions you will draw on the class reading materials. If you wish to do further research or design your own exam, you may, as long as you discuss it with me first, your topic and approach is **approved by me**, and it is properly documented. These papers will be graded out of 100 pts. There can be no re-writes on the final midterm essay.

The Final Essay: take home exam

You will write a 6 page take home exam responding to assigned topics/questions in brief essays and short answers (key terms/thinkers) covering materials and ideas from **across** last 6 weeks of the course. To answer these questions you will draw on the class reading materials. If you wish to do further research or design your own exam, you may, as long as you discuss it with me first, your topic and approach is **approved by me**, and it is properly documented. These papers will be graded out of 100 pts. There can be no re-writes on the final exam essay.

Assignment Format

All take-home exams will be turned in to me electronically through Carmen drop box. (preferably in PDF format). The length will be determined in double-space w/ 10/12 pt font, one inch margins.

LATE ASSIGNMENTS: Late midterms will lose half a grade, and then half again, every class period after that. That is A to A-, and so on. There can be no late finals!

ATTENDANCE and PARTICIPATION: Attendance is mandatory and especially important in a discussion-centered course. Absences in excess of two classes may jeopardize your final grade **no matter** the quality of your other work.

The class will spend a substantial amount of time discussing the readings and topics as a class and in smaller groups. Your cooperation is important. The atmosphere will be casual, open, but intellectually rigorous. If you feel someone is detracting from this atmosphere seriously or intentionally, please bring it to my attention.

A respectful and questioning attitude is crucial for successful discussion. The readings are difficult and sometimes controversial and disturbing; class discussions will help you to formulate and clarify your thoughts on the readings and to understand the positions others take. The issues of difference and diversity we discuss will be particularly and personally important to you and others in the class. Because we are engaging directly in issues that have social and political relevance, it is crucial that we take this seriously as well as behave respectfully, even as we question or challenge each other's views—this includes me.

Class discussions are an opportunity to explore the author's idea's relevance to your own personal and intellectual experiences. It is likely that you will be challenged or even upset by something said or read in this classroom. These ideas need to be brought into the discussion--opened to respectful questioning and disagreement. If you do not feel you can bring them up, I encourage you make an appointment to discuss them with me.

FINAL GRADES:

In-Class (in-class writings, participation, quizzes,)	20%
Group Presentation	15%
Midterm (take-home)	30%
Final Exam (take-home)	35%

Grading Scale:

94-100 A
90-93 A-
87-89 B+
84-86 B
80-83 B-
77-79 C+
74-76 C
70-73 C-
67-69 D+
60-67 D
Below 60 E

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>.

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct (http://studentaffairs.osu.edu/info_for_students/csc.asp).

PLEASE TALK TO ME **NOW** IF YOU HAVE ANY QUESTIONS ABOUT COURSE REQUIREMENTS OR MY EXPECTATIONS.

Reading and Discussion Schedule

(all readings are to be **finished** for the class indicated)

Week ONE

Aug. 22 : Emergent Technologies and the Global Landscape: issues and challenges

Week TWO

Aug. 27: *Technoculture*, “Introduction: Technology and Social Realities” Read pages 1-21: “Machines and Modernity” through “The Culture Industry” (1-21)

- Key Thinkers: Ford, Marx, Heidegger, Frankfurt School, Ellul,

Aug. 29: *Technoculture*, Introduction: Read pages 21-41 “Spectacular Culture through “Surveillance and Security”

- Key Thinkers: Debord, Jameson, Best and Kellner, McLuhan, Sassen, Foucault Science/Power/Biotechnology

Week THREE

Sept. 3: Labor Day:

Sept 5: *Technoculture*, pages 41-50

- Key Ideas/Thinkers: Darwinism, Objectivity, Kuhn

Week FOUR: Biotechnologies and Food

Sept. 10: *Technoculture*, pages 50-62

- Key Ideas/Thinkers: Foucault, Fuller, Sardar, Postnormal Science.
- Case: Bioengineering/Biotech

Sept. 12 : excerpts from *The Future of Food* video to be seen in class

Week FIVE:

Sept. 17: Ehsan Masood “A Continent Divided” Nature 426, 224 - 226, Nov. 20, 2003.

Sept. 19: Devinder Sharma, “Biotechnology, Globalization and Food Security” Nov. 2003.

Week SIX:

Sept 24: Clive James (ISAAA), “Brief 41 Global Status of Commercialized Biotech/GM Crops: 2009) Read “Future of Biotech Crops, 2010 to 2015,” pages 1-15. ON CARMEN

Sept. 26: Clive James (ISAAA), “Brief 41 Global Status of Commercialized Biotech/GM Crops: 2009) Read “Future of Biotech Crops, 2010 to 2015,” pages 16-36. ON CARMEN

Week SEVEN

Oct. 1: Friends of the Earth “Who Benefits from GM Crops”, Feb. 2010, first half: ON CARMEN

Oct. 3 Friends of the Earth “Who Benefits from GM Crops”, Feb. 2010, finish.

Midterm Questions Handed Out

Midterm Due Friday October 5th by Midnight on Carmen

Week EIGHT : Technonature Nature/Culture and Body Technologies:

Oct. 8: *Technoscience*: Chapter 3: /Culture: 63-71

- Key Ideas: Romanticism, Actor-Network Theory

Oct. 10: *Technoscience*: Chapter 3: Technonature/Culture: 71-78

- Key Thinker: Haraway, Balsamo,
- Case Study: Artificial Reproductive Technologies

Week NINE

Oct. 15: Nils Gilman: *Deviant Globalization* (listen to online lecture *before* class

(<http://longnow.org/seminars/02010/may/03/deviant-globalization/>)

Oct. 17: *Bodies across Borders, journeyman news, documentary to be watched in class.*

Week TEN

Oct. 22: Scott Carney “Cash on Delivery” ON CARMEN

Oct. 24: Catherine Waldby and Melinda Cooper, “The Biopolitics of Reproduction: Post-Fordist Biotechnology and Women’s Clinical Labour” ON CARMEN

Week ELEVEN: Virtual Realities, Gaming and Social Networks

Oct. 29: *Technoscience*: Technospaces 104-112

Key Thinker: Baudrillard

Oct. 31: *Technoscience*: Technospaces 110-23

Key Thinker: Lefevre

Week TWELVE: Twitter Revolutions

Nov. 5: Lindsay Ems, “Twitter Use in Iranian, Moldovan and G-20 summit protests presents new challenges for governments.” and Evgeny Morosov “Iran: Downside to the ‘Twitter Revolution’” (On Carmen)

Nov. 7: Edward Castronova, “The Fun Revolution: Ending the Politics of Misery” from *Exodus to the Virtual World (on reserve and on Carmen)*.

Week THIRTEEN:

Nov. 12: *Veterans Day*

Nov. 14: Group Presents

Week FOURTEEN

Nov. 19 Group presentations

Nov. 21: Thanksgiving Reess

Week FIFTEEN

Nov. 26: Group Presentations

Nov. 28: Group Presentations

LAST DAY: Dec. 3: Review/Exam Questions Handed out.

Take Home Final EXAM due on Carmen or by arrangement by Dec. 7th by midnight on Carmen

Comparative Studies 4597.01 Global Studies of Science and Technology

Rationale for GE Diversity: Global Studies Category and Assessment Plan for the Course

Course Description:

Comparative Studies 4597.01, Global Studies of Science and Technology, is a successor to the quarter course, Comparative Studies 597.01, of the same title. The course is converted as a semester equivalent, and therefore falls within the Cross-disciplinary Seminar category. The course in its quarterly form has served primarily to fulfill the GEC Contemporary Issues requirement, but has also fulfilled a major requirement for students in the Science Studies concentration within the Comparative Studies major (as long as a second course was taken to fulfill the GEC requirement). The semester version will also fulfill either a GE requirement as a Cross-Disciplinary Seminar or a major elective requirement. We are proposing that the course also fulfill the GE Diversity: Global Studies category. No changes are required in this regard; the semester conversion process is simply a convenient moment to add the second GE category.

As its title indicates, the course examines the role of science and technology in the various processes of globalization taking place in the contemporary world. Students will learn to analyze how scientific and technological change affects different cultures and how cultural values and beliefs shape the direction of science and technology in different regions of the world.

The kinds of topics addressed in the course are similar to those in such courses as Comparative Studies 272, Science and Society (converted as 2340 Introduction to Cultures of Science and Technology), which currently fulfills a GE requirement in Arts and Humanities: Cultures and Ideas. The broad general goals and the expected learning outcomes of both Cross-Disciplinary Seminars and Global Studies courses are fulfilled through the various reading, viewing, and writing assignments the class requires, and the course readily fulfills the GE Global Studies goal of helping students become “educated, productive, and principled citizens of their nation in an increasingly globalized world.”

In addressing significant issues related to science, technology, and globalization, Comparative Studies 4597.01 focuses on these elements: biotechnology, reproductive technology, and virtual and simulated realities. Through critical analysis of these scientific and technological issues, the course seeks to understand the new social realities that these emerging practices are enabling. Students will read a range of texts and view several visual texts that define these issues. Through the assignment of midterm and final essay exams, a number of short informal writings, and a group presentation to the class, as well as daily discussion, students will develop their understanding of how science and technology are related to globalization and to their own future roles as national and global citizens.

Comparative Studies 4597.01 meets the goals and learning objectives of GE Cross-Disciplinary Seminars (as a 597 successor). The course also meets the goals and objectives of Global Studies Courses in the following ways:

General Education Goals and Learning Outcomes for Global Studies Courses:

Goal: International Issues coursework help students become educated, productive, and principled citizens of their nation in an increasingly globalized world. Students will understand both positive and negative roles of science and technology in different cultural contexts of a globalized world. The class will address issues raised by new scientific knowledge and technological change primarily through study of some of the economic, political, and social effects of biotechnology on agricultural practices, of reproductive technologies, and of communications technologies (especially social networking, video-gaming, and virtual realities). Understanding

that new technologies typically produce unexpected consequences, both negative and positive, will help students become thoughtful, responsible adults.

Expected Learning Outcomes:

1. Students exhibit an understanding of some combination of political, economic, cultural, physical, social, and philosophical differences in or among the world's nations, peoples and cultures outside the U.S. Students understand the multiple interconnections of scientific advances and technological development in a globalized—and further globalizing—world. The class will address such issues as the role of Twitter in the recent Iranian protest movement, the economic consequences of using genetically modified crops in India, and the social consequences of reproductive technologies in the West.
2. Students are able to describe, analyze and critically evaluate the roles of categories such as race, gender, class, ethnicity, national origin and religion as they relate to international/global institutions, issues, cultures and citizenship. Students will analyze scientific and technological change, transnational business, and contemporary conflicts over values and conditions of life in different cultural contexts as they relate to race, gender, and other categories of difference and identity. Questions such as who has access to reproductive technologies, who benefits economically from biotechnologies used in agriculture, and the role of social networking in advancing human rights activism around the world are examples of how this class examines these categories of difference.
3. Students recognize the role of national and international diversity in shaping their own attitudes and values as global citizens. Students analyze how science and technology affect attitudes and values in a range of cultural contexts. While the course is primarily focused on how Western science and technology have affected developing nations, the uses to which those technologies may be put in those nations are also a subject of study, for example, in the role of communications technologies in social and political movements around the world.

Assessment plan for the course:

Assessment is embedded in the grading criteria for the assignments; that is, assignments will be evaluated based on the overall goals and specific learning objectives of the course. Comparative Studies courses all embody general learning objectives, including the ability to express ideas with clarity and precision in written and oral assignments; to develop coherent and persuasive arguments that rely on sound logic and specific evidence; to engage in critical analysis of written and visual texts; to understand the need for multiple disciplinary perspectives in addressing complex social and cultural issues; to appreciate the need to consider context and the role of difference and diversity in the analysis of cultural phenomena.

Courses that fulfill the GE Global Studies requirement fulfill specific GE goals, and these, too, will be incorporated into the grading criteria for all assignments as follows:

1. Students exhibit an understanding of some combination of political, economic, cultural, physical, social, and philosophical differences in or among the world's nations, peoples, and cultures outside the U.S. In their written and oral assignments, students will be expected to refer to the assigned readings (which address these issues) to support their arguments and to incorporate those ideas into their analyses. All assignments will be judged not only on the learning goals (noted above) that apply generally to Comparative

Studies classes, but to those specific to this one. In particular, students will be expected to be able to explain global and local effects of science and technology, including biotechnology in developing nations; reproductive technologies in the West; and telecommunications technologies in several national contexts.

2. Students are able to describe, analyze and critically evaluate the roles of categories such as race, gender, class, ethnicity, national origin and religion as they relate to international/global institutions, issues, cultures and citizenship. In their written and oral assignments, again, students will be expected to refer to the assigned readings to support their arguments and to incorporate those ideas into their analyses. Students will be expected, for example, to explain clearly how small farmers may be damaged economically by agribusiness, how reproductive technologies may perpetuate romanticized notions of gender, how social networking sites are affecting national politics around the world.
3. Students recognize the role of national and international diversity in shaping their own attitudes and values as global citizens. Again, students will be graded on demonstration within their assignments that they have achieved this goal. Essay exams and informal writings will be expected to show that students understand, for example, how small farmers in India have responded to biotechnology and how the political and social milieu of other nations may be deeply affected by the explosion of information technologies

In each case, the instructor will assess the degree to which both the broad objectives of Comparative Studies classes and the specific objectives of the GE requirement have been achieved in the various course assignments. The assessment of this class will focus most broadly on students' ability to express a critical understanding of the various roles science and technology play in globalization processes. The instructor will evaluate whether the student has achieved these learning objectives by confirming that the student has in fact referred to and incorporated into his or her essays and informal writing assignments the set of terms and ideas that the student has read about in the assigned texts and discussed in class. If the student is able to refer, in written assignments, to the assigned readings and the ensuing class discussions to support his or her argument, it will be assumed that the student has, to a greater or lesser degree, achieved the several learning objectives and will be graded accordingly.

In addition, students will be asked to fill out narrative evaluations at the end of the quarter (as well as online SEI's). Narrative evaluation forms used in Comparative Studies ask detailed questions regarding the effectiveness of the course, including the teaching materials. Based on the comments of the students, but also including the instructor's assessment of the course (which includes an evaluation of the materials and pedagogy employed to reach the objectives of the course), appropriate changes will be made to the syllabus.