UC 8645 05F

UNIVERSITY of HOUSTON

CORE CURRICULUM COURSE REQUEST

APPROVED NOV 1 6 2005

Originating Department/College:	Engineering Technology/Co	ollege of Technology
Person making request: Curtis D). Johnson/Enrique Barbieri	Telephone:281-370-2091/34073
Dean's signature:	··· ·	Date:
I. General Information:		
Course number and title:	TECH 1313 Impact of Mode	rn Technology on Society
	tion (NOT required if attached	d to CBM 003 form):
	·	
	h course is being proposed (n	nark only one):
Communication	Writing Intensive Experience	s in the Disciplines
Mathematics	mensive Emperione	
Mathematics/Rea	• ,)EIVED
Natural Sciences		
Humanities		OCT
Visual/Performin		
Visual/Performin		4.
X Social/Behaviora	1 Sciences	200
U.S. History		Z 4
American Govern	nment	\mathcal{C}

II. Objectives and Evaluation (respond on one or more separate sheets):

Call 3-0919 for a copy of "Guidelines for Requesting and Evaluating Core Courses" or visit the website at www.uh.edu/academics/corecurriculum

- A. How does the proposed course meet the appropriate Exemplary Educational Objectives (see **Guidelines**). Attach a syllabus and supporting materials for the objectives the syllabus does not make clear.
- B. Specify the processes and procedures for evaluating course effectiveness in regard to its goals.
- C. Delineate how these evaluation results will be used to improve the course?

SVP. Effective 9/20/05. Replaces all previous forms, which may no longer be used.

UNIVERSITY of HOUSTON

College of Technology Engineering Technology Department 304-D Technology Building Houston, TX 77204-4020 Enrique Barbieri, Ph.D Professor and Chair ebarbieri@uh.edu www.tech.uh.edu/et 713/743-4073



To: COT Undergraduate Academic Committee

Date: October 13, 2005

Subject: New Course TECH 1313 Impact of Modern Technology on Society

Attached is a packet requesting the creation of a new Core Course TECH 1313 "Impact of Modern Technology on Society" in the social/behavioral science category. The course develops an understanding of the impact of modern technological advances on the ethical, legal, moral, cultural and social behavior standards of society. The course also introduces basic social/behavioral scientific research methods (data collection and analysis) and associated review of pertinent technologies.

The packet includes a CBM form, a Core Curriculum Course Request form, the Objectives and Evaluation document, and a proposed Syllabus.

Learning. Leading.

CBM003 ADD/CHANGE FORM Undergraduate Council Graduate/Professional Studies Council New Course Change New Course Course Change Core Category: Soc Behv Sci Effective Fall Effective Fall 2006 1. Department: ET College: TECH Person Submitting Form: Curtis Johnson/Enrique Barbieri Telephone: 281-370-2091/713-743-4073 3. Course Information on New/Revised course: Instructional Area / Course Number / Long Course Title: TECH / 1313 / Impact of Modern Technology on Society Instructional Area / Course Number / Short Course Title (30 characters max.) TECH / 1313 / IMPACT MOD. TECH. ON SOC. SCH: 3.00 Level: FR CIP Code: 15.0000.00 19 Lect Hrs: 3 Lab Hrs: 0 4. Justification for adding/changing course; To meet instructional needs of students 5. Was the proposed/revised course previously offered as a special topics course? \(\subseteq\) Yes \(\simeq\) No If Yes, please complete: • Instructional Area / Course Number / Long Course Title: ___/___/_____ Content ID: _____ Start Date (yyyy3): _____ 6. Is this course offered for undergraduate credit only? ✓ Yes ✓ No 7. Authorized Degree Program(s): Core Yes No • Does this course affect major/minor requirements in the College/Department? Does this course affect major/minor requirements in other Colleges/Departments? ☐ Yes ☒ No Are special fees attached to this course? Yes No Can the course be repeated for credit? Yes No 8. Grade Option: Letter (A, B, C ...) Instruction Type: lecture 9. If this form involves a change to an existing course, please obtain the following information from the course inventory: Instructional Area / Course Number / Long Course Title ____/ _____/ _____ Start Date (yyyy3): _____ Content I.D.: ____ 10. Proposed Catalog Description: Cr. (3-0) Prerequisites: Credit for or concurrent enrollment in communication and mathematics core courses Description (30 words max.): Impact of modern technology on the ethical, legal, moral, cultural and social behavior standards of society. Includes an introduction to basic social/behavioral scientific research methods and review of the technologies. 11. Dean's Signature:

Print/Type Name: Fred Lewallen, Associate Dean for Academic Affairs

Core Curriculum Course Request

II. Objectives and Evaluation

TECH 1313 Impact of Modern Technology on Society

A. Exemplary Educational Objectives

The Exemplary Educational Objectives identified by the Coordinating Board list eight activities that a core course in the Social/Behavioral Sciences should demonstrate. The following paragraphs indicate how the proposed course addresses these objectives.

- 1. Research Methods
 - An important part of the course is an introduction to the basic scientific research methods employed in the social and behavioral sciences. Students will be introduced to the use of surveys and interviews to obtain data about attitudes, views and beliefs. The use of elementary statistics to reduce the data and charts and graphs to present the data will be included. Finally the perils of data interpretation will be discussed. In attempting to evaluate and understand the impact of technology on society the students will need to understand how data were obtained and evaluated. For sources of information students will be indoctrinated into the use of Library resources, especially the electronic journal resources accessible by computer, and the Internet.
- 2. History, Structure and Cultures In order to understand the impact of technology on society the history of that technology must be traced to see how the impact developed. A brief study of the history will be included during a review of the essential features of each technology. Students will also be exposed to the cross-cultural impact of the technology including developed and developing countries. Extensive use will be made of the Internet as a resource for information, including websites from around the world.

3,4. Alternative Considerations

While presenting changes in society apparently attributable to technology, students will be asked to consider alternative explanations for such changes, i.e., other events which could have led to the same changes in society. Studies will contrast jumping to conclusions from anecdotal or cursory review of data versus drawing conclusions from a careful study of the data and its collection process.

5. Analysis of Forces

An essential part of the course will be to study how the nature of society leads to particular changes in response to the proliferation of a particular technology. This issue is particularly important when considering the disparate cultures of the world versus the commonality of the technology. The natural evolution of technology applications with respect to changes in laws and social standards will be considered. The cross-cultural aspects of a technology will be reviewed for some technologies along with notions of ethical or moral implications of the technology.

6. Criteria for Acceptability

The critical evaluation of social changes with respect to the underlying technology form an important part of the course objectives. Students must critically evaluate the efficacy of data in demonstration of links between social changes and modern technology. Students will be challenged to consider both the positive and negative changes in society from the introduction of a new technology.

7. Creative Solutions

Students will be asked to evaluate how changes to society brought about by modern technology relate to public policy, in particular the legal issues. In those cases wherein such changes are considered detrimental they will be asked to devise proposed actions to alleviate the detrimental nature of the change. They will be asked to consider the issue of society changing because of technology versus changing technology applications to conform to existing society.

8. Diverse Cultures

Consistent with Objective 2, above, the course will endeavor to delineate how different cultures respond to the imposition of new technologies. The cross-cultural aspects of technology are well known and will be evaluated by students for a variety of technologies.

The attached syllabus illustrates, on a weekly basis, how the course will proceed from an introduction to basic research methods to a review of identified modern technology and to a consideration of potential societal changes. Students will be challenged to use the library electronic journal resources and the Internet to develop their own answers to questions of impact.

B. Evaluation of Effectiveness

The effectiveness of this course in the accomplishment of its objectives will be measured by means of survey instruments. The college already administers a course and teacher evaluation survey at the end of every semester. In addition surveys will be employed at the beginning and end of the semester to further probe the course effectiveness. The survey instruments will probe student's attitudes, opinions and knowledge of the impact of technology on society. In addition the semester end survey will ask students to evaluate their perceptions of how the course opened their eyes to consideration of the impacts of technology on the ethical, legal, moral, cultural and social norms of society.

- 1. Pre-course Survey. A multiple choice survey probing:
 - a. Knowledge about research methods in social and behavioral sciences
 - b. Understanding of how charts and graphs are used to present information
 - c. Knowledge of basic statistical measures
 - d. Definitions of society in terms of its ethical, legal, moral, cultural and social standards
 - e. Opinion on the impact of computers on society
 - f. Opinion on the impact of the Internet on society

- g. Opinion on the impact of cell phones on society
- h. Opinion on the impact of other technologies on society
- 2. Post-course survey. At the conclusion of the class a survey will be conducted involving:
 - a. The same instrument as that employed in the pre-course survey
 - b. Personal attitude questions probing:
 - 1. Effectiveness of the course in learning about the selected technology impacts on society
 - 2. Effectiveness of the instructor in leading students in the study of impacts
 - 3. Effectiveness of the syllabus in leading to study and understanding.
 - c. Solicitations of suggestions on how to improve the course

B. Employment of Evaluation Results

The pre and post survey results will be tabulated in the department office and provided to both the department chair and the instructor(s). A meeting will be held where the results of the surveys are studied and discussed. Appropriate changes to the course, its delivery style and instructor presentations will be devised to address any deficiencies identified by the evaluation results.

TECH 1313

Impact of Modern Technology on Society

SYLLABUS

Engineering Technology Department College of Technology University of Houston

Catalog Description:

TECH 1313 Impact of Modern Technology on Society Cr. 3. (3-0). Satisfies 3 hours of Social Science Core Requirement. Prerequisites: Credit for or concurrent enrollment in communication and mathematics core courses. Impact of modern technology on the ethical, legal, moral, cultural and social behavior standards of society. Includes an introduction to basic social/behavioral scientific research methods and review of the technologies.

Objective:

The objective of this course is to learn how selected modern technologies influence ethical, legal, moral, cultural and social aspects of society. The course will make extensive use of the electronics resources of the library as well as the vast resources of the Internet to research these topics.

In order to accomplish this objective, students must learn about the basic scientific research methods employed in the social and behavioral science disciplines. This will include surveys and interviews along with statistical methods of analysis and the use of graphs and charts to display data. In order to evaluate impacts on society, definitions will be developed of the ethical, legal, moral, cultural and social behavior representations of society. The study of selected technological impacts will consider first the computer, then the Internet (including email) and cell (mobile) phones. Finally a new and/or emerging technology will be selected by the class and studied. In each case there will be a brief overview of the characteristics of the technology and then a study of possible impacts on society.

Resources:

The course will make extensive use of electronic resources as the fundamental reference material for the course. Several books will be recommended to supplement information available electronically. Electronic resources will include the extensive electronic databases of magazines, peer-reviewed journals, reports and the vast information available through the Internet. Students will be required to use specified information and will be asked to search for further information from available electronic resources.

Course Evaluations

C. Evaluation of Student Performance

Student performance will be evaluated by means of the following measures:

- Homework will be assigned, turned in and graded. Homework will include using resources to research the nature of the technology and the impact of the technology as revealed by research studies.
- 2. Two in-class exams will be administered and graded.
- 3. A final exam will probe many of the issues studied during the semester.
- 4. A final paper will be written on a selected technological impact.

These combined measures will be used to determine the course grade of each student.

D. Evaluation of the Course and Instructor

The success of the course and instructor in meeting the course objective and covering the syllabus topics will be evaluated as follows:

- 1. The standard college course and teacher evaluation survey will be administered at the end of the semester.
- A survey will be administered at the beginning of the course to establish a baseline of student perceptions and knowledge of social/behavioral definitions and research methods, basic nature of the technologies studied and impact of that technology on the standards of society.
- A survey will be administered at the end of the course that includes the initial survey as well as other questions related to the student's perception that the course objective was met.

The results of these evaluations will be used to initiate changes to the course delivery systems; course content and instructor delivery methods to insure course objectives are being met.

SYLLABUS

The following syllabus gives an approximate week-by-week representation of topics covered and expected student activity. Modifications invariably occur as events beyond control of the instructor occur.

Syllabus for TECH 1355: Impact of Modern Technology on Society

Week	Topics	Activities
	Introduction.	1. Visit the library and learn
	Enumeration of course objectives, grading policy, semester plan, review of	how to search and use stack.
	assignments, review and access of resources: books, journal articles, the Internet,	2. Establish Internet access
	library electronic resources. Administration of a Pre-course survey	through university and/or
	General resources:	home computer.
	1. Website: www.wikipedia.org A "free" web based encyclopedia which has	Try out library electronic
	the characteristics of being constantly updated and edited by users to remain	resources of journals
	current. Presents information about a variety of topics along with references	
	to seek further information.	
	2. Website: www.vlib.org A Virtual Library providing searchable access to	
	websites with specializations in a cross section of knowledge.	
	3. UH Library stacks and electronic resource center. Hard copy and online	
	journal articles.	
	Journal: Technology and Culture	
	Journal: American Behavioral Scientist	
	Journal: Australian Journal of Emerging Technologies and Society	
· · · · · · · · · · · · · · · · · · ·	Journal: The New Atlantis (about technology and society)	
	4. Recommended Reference Books:	
	1. "Society and Technological Change", Rudi Volti, 3 rd Ed, St. Martins	
	Press, 1995	
	2. "Science, Technology, and Society", Robert E. McGinn, Prentice-Hall,	
	1991	
	3. "Technopoly", Neil Postman, Vintage Books, 1992	
2	Module I: Definitions and measurement of social impact.	1. Using a variety of sources,
	The objective of this module is to define the basic characteristics of society by formal	develop your personal
	definitions along with examples of the terms: ethical, legal, social, cultural and moral	definitions of terms: ethical,

	(from the US and world-wide perspective). A further objective is to define the	legal, social, cultural and
	scientific methods by which social and behavioral sciences measure and present these characteristics in terms of surveys, interviews and historical databases in association	moral. 2. Present examples from
	with charts, graphs and basic statistics. Resources:	
	1. Website: www.answers.com A website that presents explanations and definitions drawn from many other websites. Often saves the time of	3. Find and describe an example of a social and/or
		behavioral study using surveys
	in the Social Sciences: An Internet Resource List	
3	Module I (continued): Objective: consideration of "drawing conclusions vs. jumping to conclusions" via anecdotal evidence versus data analysis and interpretation using charts, graphs and basic statistical analysis.	1. Read websites about graph and chart creation and interpretation.
	Kesources: 1. Website: www.fallacyfiles.org This website presents many examples of how the wrong conclusions can be drawn from data.	 Keview cases of mis- interpretation of data from the "fallacyfiles" website.
	2. Website: www.fodoweb.com/erfora/ the creation and interpretation of charts and graphs.	3. Find other websites discussing statistical analysis of social/behavioral data
4	Module II: The Impact of Computers on Society. The objective of this module is a review of basic computer technology, including	
	technology impacts society. Resources:	
	1. Recommended Book: "How Computers Work" 7th Edition by Ron White, Que Publishing	
	2. Website: www.helpwithpes.com Information and tutorials on computers	

Т

Γ

ν.	Module II (continued): Objective: consideration of the impact of computers on home, school and work, positive and negative examples, issues of software piracy	1. Look up and read two iournal articles regarding
	Resources:	
		2. Describe a way computers
	site considers the issue of software piracy from the legal, ethical and cultural perspective.	have changed behavior in your work or home in the
	2. Journal: Communications of the ACM. Available through the library	past year.
	electronic resources, has many articles regarding the impact of computers on	3. Make a list of possible
	society.	negative aspects of
		computer usage in school
9	Module II (continued): Objective: consideration of the social, moral and cultural	1. Write out the characteristics
	issues of computer games.	of two computer games
	Resources:	delineating positive and
	1. Web Article: www.gamestudies.org/0102/squire Overview of the computer	negative impacts.
	gaming industry.	2. Read the referenced articles
	2. Web Article:	about computer games.
	http://culturalpolicy.uchicago.edu/conf2001/papers/goldstein.html This article	3. Look up a website
	examines the issue of aggressive behavior being linked to computer games.	evaluating children's
	3. Web Article: http://my.webmd.com/content/article/23/1728_56903 This	computer games and their
	article studies the relationship between computer games and aggressive,	impact on behavior.
	violent behavior.	
	4. Professional journal articles dealing with computer games and society.	
7	Module III: Impact of the Internet and Email on Society.	1. Read books and articles on
	The first objectives of this module are to review of the technology of the Internet,	how the Internet works.
	world-wide-web and email. Secondly the profound affect of this technology on	2. Read the referenced article
	society worldwide will be considered.	on how Americans use the
<u></u>	Resources:	Internet and email.
	1. Recommended Book: How the Internet Works, 7th edition, Preston Gralla,	3. Read the report on cross-

	Que Publishing 2. Web Report: www.stanford.edu/group/sigss/SIQSS_Time_Study_04.pdf This comprehensive report provides a detailed analysis of how Americans are using the Internet and email. (By the Stanford Center for the Quantitative Study of Society) 3. Web Report: faculty.washington.edu/jansp/TC512/Syllabus/readings/CrossCulturalInterfac	cultural effects of web page design. 4. Study a popular webpage and determine what aspects might be offensive to a foreign culture.
	design. 4. Electronic journal articles related to the Internet and Society	
∞	Module III (continued): Objective: consideration of changes in home, school and work activities, positive and negative examples, issues of copyright infringement (songs, movies, writings), computer games Resources:	 Read the articles referenced on ethical and legal aspects of Internet. Describe how the Internet
	Web Article: www.tekxam.com/StudyGuide/concepts/Ethics-and- Legal/TekXam Legal and Ethical Study Guide.html Comprehensive article dealing with the legal and ethical issues of Internet usage. Web Article:	has changed the purchasing of a car or other major item. 3. Discuss the ethical issues of downloading songs versus
	www.csu.edu.au/special/auugwww96/proceedings/copyright.html consideration of the legal and moral issues of Internet usage and copyrights. 3. Web Article: www.firstmonday.org/issues/issue9_6/svensson_A study of Internet song downloading legal, ethical and social issues.	downloading artwork.
6	Module III (continued): Objective: consideration of the impact of email on communication and on social behavior around the world.	1
	Resources: 1. WebSite: www.emaildisclaimers.com Legal issues associated with email	Compare the opening and reading someone postal mail
	usage. 2. Web Article: www.it.murdoch.edu.au/~sudwecks/catac98/pdf/20_gill.pdf Article on the international cultural interface of email usage.	versus their email. 3. Discuss the grammar and format used in emails versus

		that in written letters.
10	Module IV: Impact of the Cell Phone on Society. The first objective of this module is to review of the technology of cell phone characteristics and implementation. This will be followed by consideration of how the rapid worldwide deployment of cell phones has impacted society. Resources: 1. Website: www.privateline.com/PCS/How/PCSworks.htm Operation of cell phone networks 2. Website: www.electronics.howstuffworks.com/cell-phone.htm Cluttered site but good presentation on cell phone operation. 3. Web Report: www.wfs.org/trendnd02.htm Impact of the cell phone on the work and leisure environment. 4. Web report: www.aaafoundation.org/resources/index.cfm?button=cellphone Relationship between cell phone usage and driving. 5. Web Report: www.bermudasun.bm/archives/2000-04-28/03Business09 Cell phone etiquette.	 Read the referenced web resources on cell phones. Explain why several cell phone companies don't interfere with each others in the same region. Explain the good and bad aspects of being in constant contact by cell phone. Contrast talking with a passenger versus talking on a cell phone while driving.
11	Module IV (continued): Objective: Impact of cell phones and the characteristics of cameras and text messaging on private communication, communication while driving, visual privacy and illicit communication. Resources: 1. Web View: www.futurepundit.com/archives/001850.html considerations of cell phone cameras and privacy. 2. Web Report: www.legalzoom.com/articles/article_content/article13685.html Legal issues associated with cell phone cameras. 3. Web Report: www.swin.edu.au/sbs/ajets/journal/issue2/abstract_sms.htm Report of a study of cell phones and messaging to establish personal relationships. 4. Web Report: www.theworkfoundation.com/research/isociety/MobileUK_main.jsp	 Read the referenced articles on cell phones, cameras and privacy. Look up two other web articles on cell phones influence in society. Explain how cell phones can compromise educational activities.

	Comprehensive report about cell (mobile) phone usage in England.	
12	Module V: Selected Emerging Technology. The objective of this module is to let the class select a new and emerging technology and consider its potential impact on society. Technologies include: electronic product IDs, personal embedded ID chips and others. A review of the technology will be followed by consideration of its impact on society.	Select a technology that you wish to research for impact on society. Construct a brief nontechnical description of the technology and its applications
13	Module V (continued): Objective: to continue consideration of the selected technology.	Look up web sites with reports or articles on the social impact of your chosen technology. Summarize the conclusions of your references
14	Course Review and administration of post-course survey	