UNIVERSITY of HOUSTON

CORE CURRICULUM COURSE REQUEST

Originating Department/College: Engineering Technology/College of Technology
Person making request: Curtis D. Johnson/Enrique Barbieri
Telephone: 713-370-2091/34073
Dean's signature: ______________________ Date: ______________________

I. General Information:

Course number and title: TECH 1313 Impact of Modern Technology on Society

Complete catalog description (NOT required if attached to CBM 003 form):

Category of Core for which course is being proposed (mark only one):

- Communication
- Communication: Writing Intensive Experiences in the Disciplines
- Mathematics/Reasoning (IDO)
- Natural Sciences
- Humanities
- Visual/Performing Arts: Critical
- Visual/Performing Arts: Experiential
- Social/Behavioral Sciences
- U.S. History
- American Government

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.
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 CRM form, a Core Curriculum Course Request form, the Objectives and Evaluation document, and a proposed Syllabus.
CBM003 ADD/CHANGE FORM

☐ Undergraduate Council  ☐ New Course ☐ Course Change
Core Category: Soc Behv Sci  Effective Fall 2006

or  ☐ Graduate/Professional Studies Council  ☐ New Course ☐ Course Change

1. Department: IT  College: TECH
2. Person Submitting Form: Curtis Johnson/Antique Hansen  Telephone: 281-379-2091/713-743-4073
3. Course Information on New/Revised course:
   • Instructional Area / Course Number / Long Course Title:
     TECH / 1211 / Impact of Modern Technology on Society
   • Instructional Area / Course Number / Short Course Title (30 characters max.):
     TECH / 1211 / IMPACT MOD: TECH ON SOC.
   • SCH: 3.0  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? ☐ Yes ☒ No
   (Y, please complete):
   • Instructional Area / Course Number / Long Course Title:
     _____ / _____ / _____
   • Content ID: _____  Start Date (yyyyy): _____
6. Is this course offered for undergraduate credit only? ☐ Yes ☒ No
7. Authorized Degree Program(s): Core
   • Does this course affect major/minor requirements in the College/Department? ☐ Yes ☒ No
   • 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 (yyyyy): _____  Content ID: _____
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: [Signature]  Date: 11/8/06

Print/Type Name: Fred Lewallen, Associate Dean for Academic Affairs
Core Curriculum Course Request

II. Objectives and Evaluation

TECH 133
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 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. 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:
1. 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.
2. 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.
3. 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

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
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<tbody>
<tr>
<td>Activities</td>
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1. Visit the library and learn how to search and use stacks.<br>2. Establish Internet access through university and/or home computer.<br>3. Try out library electronic resources of journals

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<tr>
<th>Week</th>
<th>Topics</th>
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<tr>
<td>2</td>
<td><strong>Module I: Definitions and measurement of social impact.</strong>&lt;br&gt;The objective of this module is to define the basic characteristics of society by formal definitions along with examples of the terms: ethical, legal, social, cultural and moral</td>
</tr>
<tr>
<td>Activities</td>
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1. Using a variety of sources, develop your personal definitions of terms: ethical,
| (from the US and world-wide perspective). A further objective is to define the scientific methods by which social and behavioral sciences measure and present these characteristics in terms of surveys, interviews and historical databases in association with charts, graphs and basic statistics. | Resources:  
1. Website: [www.answers.com](http://www.answers.com) A website that presents explanations and definitions drawn from many other websites. Often saves the time of searching through other websites.  
2. Website: [www.socialresearchmethods.net](http://www.socialresearchmethods.net) General information about research methods in the social and behavioral sciences  
2. Present examples from: society, from your own experience, of each term.  
3. Find and describe an example of a social and/or behavioral study using surveys |

| 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. | Resources:  
1. Website: [www.fallacyfiles.org](http://www.fallacyfiles.org) This website presents many examples of how the wrong conclusions can be drawn from data.  
2. Website: [www.fodoweb.com/erifile](http://www.fodoweb.com/erifile) the creation and interpretation of charts and graphs. | 1. Read websites about graph and chart creation and interpretation.  
2. Review cases of misinterpretation of data from the “fallacyfiles” website.  
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 hardware and software, followed by consideration of some of the ways this technology impacts society. | Resources:  
2. Website: [www.helpwithpcs.com](http://www.helpwithpcs.com) Information and tutorials on computers |
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<th>Module II (continued): Objective: consideration of the impact of computers on home, school and work, positive and negative examples, issues of software piracy</th>
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<tr>
<td>Resources:</td>
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<tr>
<td>1. Website: <a href="http://www.answers.com/topic/copyright-infringement-of-software">www.answers.com/topic/copyright-infringement-of-software</a> This site considers the issue of software piracy from the legal, ethical and cultural perspective.</td>
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<tr>
<td>2. Journal: <em>Communications of the ACM</em>. Available through the library electronic resources, has many articles regarding the impact of computers on society.</td>
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<tr>
<td>1. Look up and read two journal articles regarding computer impact on society.</td>
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<td>2. Describe a way computers have changed behavior in your work or home in the past year.</td>
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<tr>
<td>3. Make a list of possible negative aspects of computer usage in school.</td>
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<tr>
<th>Module II (continued): Objective: consideration of the social, moral and cultural issues of computer games.</th>
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<td>Resources:</td>
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<tr>
<td>2. Web Article: <a href="http://culturalpolicy.uchicago.edu/conf2001/papers/goldstein.html">http://culturalpolicy.uchicago.edu/conf2001/papers/goldstein.html</a> This article examines the issue of aggressive behavior being linked to computer games.</td>
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<tr>
<td>3. Web Article: <a href="http://my.webmd.com/content/article/23/728_56903">http://my.webmd.com/content/article/23/728_56903</a> This article studies the relationship between computer games and aggressive, violent behavior.</td>
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<tr>
<td>4. Professional journal articles dealing with computer games and society.</td>
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<td>1. Write out the characteristics of two computer games delineating positive and negative impacts.</td>
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<td>2. Read the referenced articles about computer games.</td>
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<td>3. Look up a website evaluating children’s computer games and their impact on behavior.</td>
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<th>Module III: Impact of the Internet and Email on Society.</th>
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<td>The first objectives of this module are to review the technology of the Internet, world-wide-web and email. Secondly the profound affect of this technology on society worldwide will be considered.</td>
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<td>Resources:</td>
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<tr>
<td>1. Recommended Book: <em>How the Internet Works</em>, 7th edition, Preston Gralla,</td>
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<tr>
<td>1. Read books and articles on how the Internet works.</td>
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<tr>
<td>2. Read the referenced article on how Americans use the Internet and email.</td>
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</table>
| 3. Read the report on cross-
   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/jasp/TC512/Syllabus/readings/CrossCulturalInterface.pdf
   Comprehensive study of the cross-cultural influences on web page
   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:
1. 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.
2. Web Article:
   www.esu.edu.au/special/aupwww96/proceedings/copyright/copyright.html
   consideration of the legal and moral issues of Internet usage and copyrights.
   A study of
   Internet song downloading legal, ethical and social issues.

Module III (continued): Objective: consideration of the impact of email on
communication and on social behavior around the world.

Resources:
1. WebSite: www.emaildisclaimers.com
   Legal issues associated with email usage.
   Article on the international cultural interface of email usage.
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<th>Module IV: Impact of the Cell Phone on Society.</th>
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<tr>
<td>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.</td>
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<tr>
<td>Resources:</td>
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<tr>
<td>2. Website: <a href="http://www.electronics.howstuffworks.com/cell-phone.htm">www.electronics.howstuffworks.com/cell-phone.htm</a> Cluttered site but good presentation on cell phone operation.</td>
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<tr>
<th>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.</th>
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<tr>
<td>Resources:</td>
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1. Read the referenced web resources on cell phones. |
2. Explain why several cell phone companies don’t interfere with each others in the same region. |
3. Explain the good and bad aspects of being in constant contact by cell phone. |
4. Contrast talking with a passenger versus talking on a cell phone while driving. |

1. Read the referenced articles on cell phones, cameras and privacy. |
2. Look up two other web articles on cell phones influence in society. |
3. Explain how cell phones can compromise educational activities.
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<th></th>
<th>Comprehensive report about cell (mobile) phone usage in England.</th>
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</table>
| 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. |
| 13 | **Module V (continued): Objective:** to continue consideration of the selected technology. |
| 14 | **Course Review and administration of post-course survey** |