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Request for Curriculum Council Action

NOV - 9 2009

Revised 11-18-09

TO: Zahia Drici, Associate Dean of Curriculum

DATE SUBMITTED: 10.27.09

(Please submit 14 double-sided copies of your proposal)

FROM: (Name) Joel Haefner

(Department) Mathematics/Computer Science

1. Proposed Action (Please check all that apply):

Title	Number	Units
<input type="checkbox"/> New Course (No Gen Ed)	/	/
<input checked="" type="checkbox"/> New Course (Gen Ed) <u>Values, Ethics, and Issues in Cybertechnology</u>	/ CS 222	/ 1
<input type="checkbox"/> Gen Ed for Existing Course:	/	/
<input type="checkbox"/> Deletion	/	/
<input type="checkbox"/> Change title from	/	/
to	/	/
<input type="checkbox"/> Change number from	/	/
to	/	/
<input type="checkbox"/> May Term Course	/	/
<input type="checkbox"/> New Major/Minor		
<input type="checkbox"/> Revised Major/Minor		
<input type="checkbox"/> Other	/	/

2a. Please check the category, if any, for which you are requesting General Education unit credit:

- Analysis of Values
- The Arts
- Contemporary Social Institutions
- Cultural and Historical Change
- Formal Reasoning
- Gateway Colloquium
- Intellectual Traditions
- Literature
- Second Language
- Life Science Issues
- Life Science Lab
- Physical Science Issues
- Physical Science Lab
- Physical Education
- Fitness

2b. Please check the flag(s), if any, you are seeking:

- Writing Intensive
- Global Diversity
- U.S. Diversity


3. Please insert here the proposed catalog course description. Course descriptions should be limited to no more than 50 words, not counting (a) title; (b) prerequisites; (c) General Education category; and (d) when offered.

An overview of the ethical issues which shape modern technology, including such topics as free expression and content control, intellectual property, privacy and information access, crime and security, and concepts, methodology, and codes of cyberethics. Theory and actual cases will be analyzed in readings, discussion, and written work.

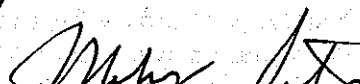
4. Please list any prerequisites: None
5. When will this course first be offered? Spring 2011
6. Please indicate how often course is offered. *Check only the single item that best describes this course. Because these are the only intervals used in the University Catalog, please do not edit or alter the list to fit a particular course. For example, if your course is offered every third year—an interval that does not appear in the Catalog—you might choose "Offered as needed" or "Offered occasionally" instead.*
- | | |
|--|--|
| <input type="checkbox"/> Offered each semester | <input checked="" type="checkbox"/> Offered in alternate years, Spring |
| <input type="checkbox"/> Offered each Fall Term | <input type="checkbox"/> Offered in alternate years, May Term |
| <input type="checkbox"/> Offered each spring | <input type="checkbox"/> Offered annually |
| <input type="checkbox"/> Offered each May Term | <input type="checkbox"/> Offered every third semester |
| <input type="checkbox"/> Offered each semester and May Term | <input type="checkbox"/> Offered as needed |
| <input type="checkbox"/> Offered occasionally | <input type="checkbox"/> Offered on request |
| <input type="checkbox"/> Offered in alternate years | <input type="checkbox"/> Offered by arrangement |
| <input type="checkbox"/> Offered in alternate years, Fall Term | |
7. Is/are any other department(s) affected in any way by this request (e.g., course is cross-listed, team-taught, etc.)?
- No. Yes. In what way?

 Signature of the Head(s) of the Affected Department(s), School(s) or Program(s)

8. **WRITTEN RATIONALES:** If this proposal presents a new course (whether for General Education credit or not), an existing course for which General Education credit is now being sought, a May Term course, or a new major, minor or concentration, please attach a written rationale, following the guidelines found in the *Curriculum Development Handbook*. Please note that CC cannot evaluate incomplete proposals, so to expedite consideration of your submission, you are encouraged to read and follow the guidelines carefully.
9. The Curriculum Council assumes that the faculty members of your department have seen and approved of this request. Please sign below if this assumption is correct:



 Signature of Faculty Member Primarily Responsible for This Proposal



 Signature of the Head of the Department, School or Program

Rationale for Course Proposal: Computer Science 222: Values, Ethics and Issues in Cybertechnology

A. Overview

This course offers mid-career students the opportunity to explore through readings, class discussions, and extensive writing the ethical issues which shape modern technology. An Analysis of Values, Writing Intensive flagged general education course, CS 222 will examine such topics as free expression and content control, intellectual property, privacy and information access, crime and security, and concepts, methodology, and codes of cyberethics. Students will be required to write microessays on readings, a discussion log, four short "scenario" papers, and a longer research paper which concludes the class; students will also be asked to participate in a scenario-based oral presentation based on issues raised in readings. Course objectives include critical thinking skills of analysis, evaluation, interpretation and judgment; well-developed writing skills, particularly the ability to write thesis-driven papers which master argumentative structure and marshal evidence well; information literacy skills that inform the discovery and research stages of the writing process as well as student texts.

B. Place in the CS curriculum and WI mandate

This course will not be counted towards the Computer Science major. It is intended to be a general education course in the Analysis of Values category with a Writing Intensive flag. The proposed course will, nevertheless, address a recommended element of a Computer Science curriculum, namely Social and Professional Issues, as approved in 2001 by the Association for Computing Machinery (ACM), the governing body of the discipline (http://www.acm.org/education/education/education/curric_vols/cc2001.pdf). The proposed course has been designed to meet many of the curricular needs articulated by the ACM, but, because it is intended for a broader audience, issues examined in the course will range across the field of modern cybertechnology. I am also seeking a Writing Intensive flag for the course, partly as a response to the 2007 faculty mandate that all students take one WI course before the end of their sophomore year.

C. Staffing

The course will be taught by Joel Haefner, Lecturer in Computer Science. Since Dr. Haefner currently teaches one section of CS126 (for non-majors) or one section of CS127 (introductory course for majors) in the spring, the addition of this class will not significantly impact staffing of required offerings in the major. Other CS faculty are also qualified to teach this class, should interest and opportunity warrant it.

D. Why course is offered at this level

This course is being offered at this level because there is a demonstrated need for mid-career courses in the Analysis of Values General Education category and in the Writing Intensive flag. Furthermore, it would offer Computer Science majors and students in other technology-centered majors (e.g., Biology, Mathematics, Physics, etc.) an opportunity to be exposed to some of the

values-based issues connected with twenty-first technology early in their college careers to make them aware of ethical implications in cybertechnology.

E. Library, computer, media resources

At this time, no additional library, computer or media resources are projected if the course is approved. Ames Library currently subscribes to the ACM Digital Library, which contains significant material on computing; many of the issues and readings explored in the class will encompass material offered through databases like Academic Search Premier, JSTOR, Lexis/Nexis or PsychInfo. No exceptional software is required for this course.

F. General Education Goals

This course would meet General Education Goals 1, 5, and 6, as amended in 1995 and published in the General Education Handbook and elsewhere. Goal 1, "To develop students' capacities for critical thinking, intellectual independence, and imagination by creating opportunities for active learning," would be met through readings, class discussion, nearly all the writing tasks, and other in-class activities. Goal 5, "To develop students' capacities for expressing and communicating ideas in writing and orally, in English and in another language, and for using writing as a means of discovery and understanding," would be supported in a variety of writing situations, including reading responses posted in an online message board, microessays on readings, scenario writing pedagogy (particularly grounded in "active learning"; see discussion below), and in a culminating research paper. The emphasis on the writing process in the class (including instructor responses to drafts, peer review, and whole class workshops) would also support this goal. The sixth General Education goal, "To foster in students the ability to make and assess judgments of value in such areas as ethics, aesthetics, and public policy by encouraging them to frame questions of value, to explore alternative value systems, and to become informed, active citizens in public life," would be supported partly through the readings and thematic content of the course, since it does focus on values and ethics implicit in cybertechnology. Other class tasks—such as scenario assignments, microessays, and in-class debates—would also emphasize the evaluation and exploration of value systems.

G. Analysis of Values Goals and Criteria

1. *Recognizing and understanding normative value issues.* This course identifies four major areas of controversy in cybertechnology: free speech, intellectual property, privacy, and security and crime. These issues are common in the fifteen syllabi for similar courses that I examined. Each of these topics encompass contending positions. Free speech: Some advocate for unrestricted free speech and information access on the Internet; others propose legal limits in cases of pornography and hate speech. Intellectual property: in terms of cybertechnology, this issue hinges on copyright law. One extreme position is espoused by John Perry Barlow, who proposes the abolition of copyright; on the other side, copyright protectionists face both technical questions (e.g., encryption) and philosophical conundrums (e.g., balancing the common good with restricted information access). Privacy: cybertechnology calls into question the very definition of privacy: can we control our private data (the control theory) or should we simply be able to control access to our data (the restricted access theory)? Positions on this topic range between these two poles. Security and crime: This issue intersects often with privacy concerns.

Some entities, like the ACLU, decry the loss of privacy in the name of national security; others advocate for advanced security, such as biometric technology. Definitions of what constitutes crime and for whom are engaged with this topic.

Students are also introduced to major theories and methodologies to help them understand these issues in the first three weeks of the course. The touchstone for cyberethics is James Moor's 1985 article "What is Computer Ethics," which argues for the unique context of modern technology in thinking about ethical values; Moor concludes that "rational ethics" based on "limited relativity" is called for in the singular field of cyberethics. Subsequent readings engage and complicate Moor's position; one more radical essay by Floridi and Sanders argues that traditional ethics is "biocentric" and ethics for "information entities" (e.g., artificial intelligences) needs to be developed.

2. *Understand and evaluate contrasting theories.* The readings assigned highlight contrasting opinions and viewpoints for the four issues listed above. Some of the readings are excerpts from court hearings or decisions, such as the federal case concerning the Patriot Act, *U.S. vs. American Library Association*.
3. *Examining and defending rational positions about normative value issues.* Class discussion will in part encourage students to discuss and defend ethical positions, but other pedagogical strategies, described below, will also reinforce this skill set. Specifically, scenario-based oral presentations, scenario-based writing assignments, and participating in an online message board will catalyze analyzing and defending positions.
4. *Consideration of interpersonal, professional, and social contexts of ethical issues.* Class discussion and the types of scenarios given to students for oral and written assignments should encourage this kind of self-reflection and contextual thinking. In addition, the text selected includes ethical policy statements from two digital professional groups; students will be asked in a writing assignment to analyze a code of ethics for their projected professions.

H Writing Intensive Goals and Criteria

1. *Significant practice in writing, 15-20 pages minimum.* Excluding drafts, I have projected four short papers at five pages each, one 10-page research paper, seven or eight microessays, and participation in an online message board. My rough estimate for the total number of pages is 35.
2. *Focus on writing as a process.* Each formal paper (five in total) will undergo an invention/drafting/final drafting process, with instructor intervention at all stages. In addition, participation in the message board will underpin the invention stage of writing assignments, and the oral presentations assigned will dovetail with short paper assignments.
3. *Understanding varied purpose and audience.* While the primary focus of most of the readings is scholarly writing, some of the readings are drawn from different rhetorical environments. The four shorter formal papers, because they are scenario-based, assume a full and differing rhetorical situation. Students will be expected to write to the audience for the relevant purpose implied in the assigned scenario.
4. *Writing for invention and discovery.* This course will encourage students to write for discovery and invention in four ways: through participation in an online discussion forum, through freewriting in class, through microessays asking students to summarize

and analyze readings, and through a well-articulated process for each formal writing assignment.

I. Assessment

I plan on employing several assessment tools for this course:

a) Formative assessment. At the end of the sixth week, students will be asked to anonymously write responses to questions concerning the readings, the management of the writing process, the pace and structure of the course, the nature of the writing assignments, instructor comments on drafts, class discussion, and other areas.

b) Summative assessment. The standard IWU student assessment tool will be given, with four additional questions:

1. Evaluate the class readings. Were they too difficult or too easy? Did they pertain to the topic of the course? Did assignments complement the readings?
2. Evaluate class discussion. Did the instructor keep discussion focused on the topic or reading assigned? Were class members encouraged to participate? Were important ideas articulated and emphasized in class discussions?
3. Evaluate the writing assignments. Were assignments clearly defined? Did assignments complement readings and class discussion?
4. Evaluate writing instruction. Were peer review sessions useful? Were class writing workshops useful? Was feedback on drafts helpful? Did you feel that the writing process was helpful and integrated into the course?

c) Writing scoring. When appropriate, I plan to submit papers from the class to the ongoing writing assessment and scoring effort on campus.

J. Outline of the Course

A. Tentative Schedule & Readings

Text: Spinello, R. A. and H. T. Tavani, eds. (2004) *Readings in CyberEthics*, 2nd ed. Sudbury, MA: Jones and Bartlett Publishers.

Graff, G., Birkenstein, C., and Durst, R., eds. (2008) *"They Say/I Say": The Moves That Matter in Academic Writing*. New York: Norton.

Online resources, for example The Research Center on Computing and Society, <http://www.southernct.edu/>

Unit I: Concepts, methodologies, and codes of Cyberethics [Weeks 1-3]

Sample readings, from Spinello & Tavani:

Bynum, T., "Ethics and the Information Revolution," 13-29

Johnson, D., "Ethics On-Line, 30-39

Floridi, L., and Sanders, J.W., "The Foundationalist Debate in Computer Ethics," 81-95
and other readings

Unit II: Free Speech and Content Control [Weeks 4-6]

Sample readings, from Spinello & Tavani:

Lessig, L., "The Laws of Cyberspace," 134-144

ACLU, "Fahrenheit 451.2: Is Cyberspace Burning?", 159-172
Rosenberg, R.S., "Filtering the Internet in the United States: Free Speech Denied?", 173-179
and other readings

Unit III: Intellectual Property in Cyberspace [Weeks 7-9]

Spinello, R., "Digital Music and Peer-to-Peer File Sharing," 269-272

McFarland, M., "Intellectual Property, Information, and the Common Good," 294-304

Warwick, S., "Is Copyright Ethical? An Examination of the Theories, Laws, and Practices Regarding the Private Ownership of Intellectual Work in the United States," 305-321
and other readings

Unit IV: Privacy and Access [Weeks 10-12]

Moor, J.H., "Toward a Theory of Privacy for the Information Age," 407-417

Tavani, H., and Moor, J. H., "Privacy Protection, Control of Information, and Privacy-Enhancing Technologies," 436-449

Introna, L.D., "Workplace Surveillance, Privacy, and Distributive Justice," 476-487
and other readings

Unit V: Security and CyberCrime [Weeks 13-15]

Manion, M., and Goodrum, A.A., "Terrorism or Civil Disobedience: Toward a Hacktivist Ethic," 525-535

Denning, D.E., "Cyberterrorism," 536-541

Brey, P., "Ethical Aspects of Facial Recognition System in Public Places," 585-600

Buchanan, E., "Ethical Considerations for the Information Professions," 613-624
and other readings

B. Cognitive objectives

- Understanding and respecting a variety of perspectives on an issue
- Stating and supporting a clear position
- Recognizing and working with audience and rhetorical environments
- Accessing and analyzing information

C. Pedagogical strategies:

- Scenario-based active learning assignments. Three average-length formal papers (5-6 pages) will be scenario-based, meaning that assignments will describe a realistic situation which demands a value decision—such as a legal case or a workplace policy
- Scenario-based in-class oral performances. Students will be asked to simulate a realistic "scene" where a value decision is debated, complementing the written assignments described above.
- Writing process pedagogy. For all the formal writing assignments, a draft will be responded to by the instructor and returned for revisions.

D. Writing tasks:

- a) online discussion. Required before each reading assignment: one question and one response to a student question.
- b) scenario papers. A specific rhetorical situation given for each paper.

- c) notes for in-class debates
- d) peer review of drafts of papers
- e) mircoessays for most readings
- f) a 10-page research paper

E. Sample possible writing assignments:

Unit II Scenario paper: Imagine that the IWU administration, in effort to create a secure campus environment, has decided to block access to several websites which celebrate shootings at universities. As a student member of the Web Advisory Group, you have been charged with writing a 5-page position statement which supports or opposes blocking these sites. Policies at other institutions, legal decisions, ethical statements and other external material might bolster some of your arguments. A workshop with IWU CS library liaison Stephanie Davis-Kahl should help you in your search for resources.

Unit III Scenario paper: You're an assistant business manager for a music group [choose your favorite group here]. Your group is about to release a new collection of music which took a full year in and out of the studio to produce. Fans want all or most of the music released free on through a peer-sharing site; record executives with whom your group has worked in the past want usual fees and royalties. The music group wants a 5-page statement released on its website laying out clearly the group's position, and you've been charged with creating the first draft (which should be quite polished but which will be revised by subsequent staffers). In fact, another student will be charged with modifying your draft. A conference with your instructor at the rough draft stage is required.

Unit IV Scenario Paper: A large local insurance multinational corporation is dealing with a significant furor. The company has initiated an extensive employee surveillance program, keeping track of employees' email, web surfing, and telephone calls; they have even demanded access to employees' home computers and cell phones. A recent rash of high-profile personal data theft from a competing insurance company led to the surveillance effort. Employees, of course, argue that this is an illegal invasion of their privacy. A task force of management and employees has been assigned to explore the controversy and draft a recommendation to scrap or continue the program. In groups of three, each of you will generate a 5-page memo to the CEO of the company making a recommendation. A Writing Center tutorial of the rough draft is required.

Research paper: using the questions generated in our online environment, craft a 10 page code of ethics for your planned profession and an analysis/elucidation of that code. This paper will go through several stages, including the development of a research question, a short analytic review of literature, an introduction with thesis statement, a rough draft, and a final draft. A conference with your instructor before the rough draft is submitted is required.