

1-2015

# CSCI 215E.01: Social and Ethical Issues in Computer Science

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The University Of Montana  
Missoula College  
Department of Applied Computing and Electronics  
Course Syllabus

**CSCI 215E Social and Ethical Issues in Computer Science**

Sections 01

Prerequisites: WRIT 101 College Writing

Class Meetings: TR 12:40-2:00 HB03

Final Exam: Friday, May 15 8:00-10:00am

Credits: 3

Syllabus Last Revised: January 2015

**Faculty Contact**

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**Course Description**

Exploration of ethical issues in the field of computing. Skills needed to identify and analyze various ethical concerns. Standard ethical concepts and theories, methods of ethical analysis. Strong emphasis on practical application of the ethical process.

**Course Overview**

Social and Ethical Issues in Computer Science studies ethical decision making in the complex world of information technology. The course begins with a survey of general ethical principles and decision making processes, examining effective tools and guidelines to resolve complex dilemmas. The remainder of the course explores information technology-specific ethical issues. Included will be discussions on professionalism involving business relationships, codes of ethics, accountability and licensure; intellectual property including patents copyrights, and trade secrets; online behavior including SPAM, hacking, and social engineering; and privacy issues such as data mining, surveillance, and transaction generated information.

In addition to the ethical component of the course, CSCI215E fulfills a lower division writing requirement. Assignments focus on basic grammar, sentence structure, mechanics capitalization and punctuation), paragraph structure, topic sentences, thesis statements, and introductory and closing paragraphs.

This course explores ethical issues in the field of computing. Students will develop the skills needed to identify and analyze various ethical concerns. We will cover standard ethical concepts and theories, as well as standard methods of ethical analysis. I place a strong emphasis on practical application of the ethical process.

This means that once you've learned the basics of ethical analysis, you'll apply that information to different scenarios. It's important to keep in mind that the field of ethics considers many different viewpoints. A good ethicist will fairly evaluate positions that may, on a personal level, be far outside his or her comfort zone. I expect you to become good ethicists! Your ethical analysis work will usually be in the form of an essay, so you'll practice your writing skills at the same time that you practice your ethics skills. Initial writing assignments will work on grammar, punctuation, and sentence structure. In short order, we'll move to topic sentences and paragraph structure, then expand to a full essay with introduction, body text, closing, and thesis statements. Once we reach that point in the assignments, you'll continue using that format for the remainder of the semester.

**This course requires reading, writing, reflection, and critical thinking! Each week expect to read around 50 pages and write at least one page.**

### Learner Outcomes

- Explain the positive impact of computers on society;
- Explain the potential negative impact of computers on society;
- Explain legal issues related to computing;
- Describe professionalism and code of ethics;
- Discuss post-9/11 legislation as it relates to computing including the USA Patriot Act
- Identify and describe common ethical concepts and theories.
- Analyze ethical dilemmas and articulate a clear, descriptive account prior to forming a normative course of action.
- Demonstrate one or more processes of philosophical analysis.
- Identify common ethical issues facing professionals in the field of information technology.
- Apply ethical concepts and an analytical process to common dilemmas found in the information technology field.
- Demonstrate writing competency in the following areas: development of idea, organization, appropriate voice, proper mechanics, and relevance to assignment

### General Education

CSCI 215E is a designated lower division writing course. It also fulfills the Ethical and Human Values Perspective 5 General Education Graduation Requirement as defined in The University of Montana Catalog.

### Textbook

Quinn, M. J. (2012). *Ethics for the information age*. Upper Saddle River, NJ: Addison-Wesley. 5<sup>th</sup> Ed. ISBN 978-0-13-285553-2

Adelson, H., Ledeen, K., & Lewis, H. (2008). *Blown to bits: Your life, liberty, and happiness after the digital explosion*. (1st ed.). Addison-Wesley. ISBN 978-0-13-285553-2

Download PDF Format through Creative Commons Licensing: <http://www.bitsbook.com/excerpts/>

### Reading

This course contains a significant volume of reading. Students are expected to complete a weekly reading assignment. Reading will be assessed through classroom participation, writing assignments, and the final exam.

### Assessment

Grades will be weighted and graded as follows:

<u>Assessment Area Weighting:</u>		<u>Grading Scale:</u>	
Participation	10%	90-100%	A
Weekly Reflection Paper (10)	40%	80-89%	B
Analysis Paper (2)	30%	70-79%	C
Final Exam	20%	60-69%	D

### **Academic Conduct**

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and /or a disciplinary sanction by The University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at:

[http://www.umt.edu/vpsa/policies/student\\_conduct.php](http://www.umt.edu/vpsa/policies/student_conduct.php)

Using the Web to research materials and concepts is an integral part of learning in the twenty-first century. Studying with other students is a productive method of learning. A certain amount of collaborating on concepts with other students and using resources found on the Internet in an assignment is recommended. Copy and paste is not acceptable. It is expected that each student will input his/her assignment into the computer, and each student must be able to explain any assignment turned in.

The subject of plagiarism is discussed in Appendix A of the Quinn textbook (p. 491). Please be sure to review this section of the textbook prior to submitting any assignments for the course.

### **Writing Requirements**

Students are expected to demonstrate writing competency in the following areas: development of idea, organization, appropriate voice, proper mechanics, and relevance to assignment. Writing will be assessed using reflection papers and analysis papers.

All writings are to be submitted in hard copy format and should be completed using a word processor. Papers must be double-spaced, contain a page number in the upper right-hand corner, and use the APA style for citations and references. Cover page (see Appendix B) and a References page are required. No running headers. Use twelve (12) point Times New Roman or Arial font style. Examples of general APA format can be found at the Purdue Online Writing Lab <https://owl.english.purdue.edu/owl/resource/560/01/>. The Mansfield Library provides an APA Citation Style Guide: <http://libguides.lib.umt.edu/content.php?pid=3183&sid=17365>.

In most cases, a third person narrative voice should be used in all writings. Prior to final submission, all papers are required to complete the following process: final review by author, revision, peer review, revision and final submission.

An example cover page is found in the syllabus appendices. All writing assignments are due at the start of class.

### **Reflection Papers**

This course requires students to write a weekly reflection paper based upon a topic covered in readings from the Quinn textbook and discussion topics developed in the classroom. Ten (10) reflection papers are required. No title page is needed for reflection papers, rather "Your Name" and "Reflection Paper #xx" should be included on separate lines, single-spaced, in the upper right header of the document. Be sure to include references where needed.

Unless otherwise instructed, please write using third person voice. The expected length of a reflection paper is 300-400 words (approximately 1 page double-spaced). Citing reference using APA citation style is required. Consider a format similar to a newspaper editorial. Reflection papers are assessed as follows:

Superior (++) indicates the submission meets the minimum length, contains limited grammar/spelling/mechanical errors, and uses strong logic. 5 points

Acceptable (+) indicates the submission meets the minimum length, but needs improvement in the areas of grammar/spelling/mechanical errors or logic. 4 points

Unacceptable (0) indicates either a missing submission or a submission which is unacceptable due to limited length, excessive grammar/spelling/mechanical errors, or extremely poor logic. 0 points

### **Analysis Papers**

Analysis Papers provide students the opportunity to examine an ethical dilemma in greater depth. Topics for Analysis Papers will be based upon readings from the in the Submissions are 1200-1500 words in length. A minimum of two analysis papers are required each semester. Citing reference using APA citation style is required. Use third person voice. Title page, Reference page, and APA citation style are required. Please do not use a running header.

Appendix B of the syllabus provides an assessment rubric which further describes requirements for analysis papers Appendix C provides an example of the required title page. Appendix D provides a copy of the Program-level Writing Assessment Holistic Rubric for UM. All manuscripts must demonstrate writing competency at the proficient or advanced level. Papers not meeting this criteria are required to be rewritten.

### **Dropping and Adding Courses or Changing Sections, Grading or Credit Status**

University Policy for dropping courses or requesting grading/credit status changes can be found in the catalog: <http://www.umt.edu/registrar/students/dropadd.php>. Students should become familiar with all academic policies found in the catalog.

### **Disability Accommodations:**

Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely way. Please contact me if you will be requesting an accommodation. Please be prepared to provide a letter from your DSS Coordinator. For more information, visit the Disability Services website at <http://www.umt.edu/dss> or call/text 406.243.2243.

Good luck this semester and I hope you enjoy the course!

### **Topic Outline** (subject to revision)

1. Catalyst for Change
2. Introduction to Ethics
3. Networked Communications
4. Intellectual Property
5. Privacy I: Information Privacy
6. Privacy II: Government
7. Security
8. Reliability
9. Professional Ethics
10. Work and Wealth

## Appendix A: Curriculum Calendar - Spring Term 2014

(January 13, 2014 – subject to revision)

	Week	Reading Assignment	Tuesday	Thursday	Writing Assignment
28-Jan	1	Quinn Ch. 1 Catalyst for Change	1.1 Introduction	2.1 Milestones	
4-Feb	2	Quinn Ch. 2 Intro to Ethics	2.1 Relativism	2.2 Egoism/Kantianism	2/4 - Reflection Paper 1 (RP1)
11-Feb	3	Quinn Ch. 10 Work and Wealth	2.3 Utilitarianism	2.4 The Social Contract	2/11 - RP2
18-Feb	4	Quinn Ch. 3 Networked Communications	3.1 Communications Technologies	3.2 Freedom of Expression	2/18 - RP3
25-Feb	5	Quinn Ch. 4 Intellectual Property	4.1 Rights & Protection	4.2 Open Source & Creative Commons	2/25 - RP4
4-Mar	6	Quinn Ch. 5 Information Privacy	5.1 Right of Privacy	5.2 Information Disclosure	3/4 - RP5
11-Mar	7	Blown to Bits	5.3 Data Mining	TBA	3/11 - RP6
18-Mar	8	No Reading	Writing Workshop	6.1 Government Surveillance	<b>Analysis Paper 1</b>
25-Mar	9	Quinn Ch. 6 Privacy and Government	6.2 Patriot Act	6.3 Private & Public Databases	3/25 - RP7
1-Apr	10	<b>Holiday - Spring Break</b>			
8-Apr	11	Quinn Ch. 7 Computer and Network Security	7.1 Hacking & Malware	7.2 Cyber Crime	4/10 - RP8
15-Apr	12	Blown to Bits	Lewis – Online Lectures: Google B2B Part II	8.1 Computer Reliability: Therac-25	4/15 - RP9
22-Apr	13	Quinn Ch. 8 Computer Reliability	Finish Ch. 8: EULA 9.1 Codes of Ethics	Writing Workshop	<b>Analysis Paper 2</b>
29-Apr	14	Quinn Ch. 9 Professional Ethics	9.2 Professions & Whistleblowers	10.1 Automation & Globalization	5/1 - RP10
6-May	15	No Reading Assignment	10.2 Digital Divide	Review for Final Exam	No Writing Assignment
13-May	16	<b>Final Exam Week</b>			

## Appendix B: Analysis Paper Grading Rubric

### CSCI 215E Ethics in Computer Science Analysis Paper Grade Rubric

Name:	Score: (max 50 points)
	<p><b>Understand the content found in the assigned readings and identify the ethical dilemma.</b>            Demonstrate a strong understanding of the content and clearly identify multiple ethical dilemmas (5 points).            Demonstrate some understanding of the content and partially identify at least one ethical dilemma (3 points).            Demonstrate a limited or no understanding of the content or dilemma (1 point).</p>
	<p><b>Identify the multiple perspectives and stakeholders associated with an issue</b>            Identify more than one perspective on an issue (5 points).            Identify a singular perspective on an issue (3 points).            Inability to provide a definite perspective on an issue (1 point).</p>
	<p><b>Use of ethical philosophy in forming an argument</b>            Examine an issue through the use of multiple ethical philosophy (5 points).            Examine an issue using a singular ethical philosophy (3 points).            No use of ethical philosophy is found in the texts (1 points).</p>
	<p><b>Use of analogies and/or examples in illustrating a dilemma</b>            Writer has provided numerous examples or analogies to illustrate the dilemma (5 points).            Writer has provide at least one example or analogy to illustrate the dilemma (3 points).            Writer has not used a single example or analogy to illustrate the dilemma (1 point)</p>
	<p><b>Compose written documents that are appropriate for a given audience or purpose (Learning Outcome 1)</b>            The texts show a strong sense of purpose and audience. (5 points)            The texts show some attention to purpose and audience (3 points)            The texts show little understanding of purpose and/or audience (1 point)</p>
	<p><b>Formulate and express opinions and ideas in writing (Learning Outcome 2)</b>            Expression of ideas is articulate, developed, and well-organized. (5 points).            Expression of ideas may be vague, unclear, and/or unorganized at times (3 points).            Expression of ideas is confusing, minimal, or irrelevant; the organization is illogical or weak (1 point).</p>
	<p><b>Use writing to learn and synthesize new concepts (Learning Outcome 3)</b>            These texts demonstrate an ability to synthesize concepts (5 points).            These texts demonstrate developing ability to synthesize concepts. (3 points)            These texts demonstrate difficulty in synthesizing concepts. (1 point).</p>
	<p><b>Find, evaluate, and use information effectively (Learning Outcome 5)</b>            The texts consistently show the writer's ability to evaluate and use information effectively (5 points).            The texts reveal the writer's uneven ability to use information; use of information may be insufficient (3 points).            The writer's use of information is inaccurate, inappropriate, or missing (2 points)</p>
	<p><b>Appropriate use of APA writing conventions (Learning Outcome 6)</b>            Demonstrate APA writing conventions with general success (5 points).            Demonstrate minimal knowledge of APA writing conventions (3 points).            Demonstrate little to no awareness of APA writing conventions (1 point).</p>
	<p><b>Demonstrate appropriate English language usage (Learning Outcome 7)</b>            While there may be a few errors in grammar, usage, and mechanics, a strong command of English language usage is clearly evident (5 points).            A basic control of English language usage is apparent, even though frequent errors in grammar, usage, or mechanics may occasionally hinder understanding (3 points).            Severe problems with grammar, usage, and mechanics show poor control of English language and impede understanding (1 points).</p>

## Appendix C: Cover Page Example

*Assignment Name*

by  
Student Name

Submitted to  
Thomas Gallagher

In Partial Fulfillment of Requirements for  
CSCI 215E Societal and Ethical Issues in Computer Science

The University of Montana  
Spring 2015

## **Appendix D: UM-Missoula University-wide Program-level Writing Assessment Holistic Rubric**

(Created by the ASCRC Writing Committee, Revised May 13, 2013)

### **Learning Outcomes for Approved Writing Courses**

1. Compose written documents that are appropriate for a given audience or purpose
2. Formulate and express opinions and ideas in writing
3. Use writing to learn and synthesize new concepts
4. Revise written work based on constructive feedback
5. Find, evaluate, and use information effectively
6. Begin to use discipline-specific writing conventions (largely style conventions like APA or MLA)
7. Demonstrate appropriate English language usage

#### **Score 4: Advanced**

The texts show a strong sense of purpose and audience. Expression of ideas is articulate, developed, and well-organized. These texts demonstrate a clear ability to synthesize concepts. The texts consistently show the writer's ability to evaluate and use information effectively. Writing style (word choice and sentence fluency) is highly effective for the purpose and audience. The writer is beginning to use discipline-specific writing conventions with general success. While there may be a few errors in grammar, usage, and mechanics, a strong command of English language usage is clearly evident.

#### **Score 3: Proficient**

The texts show a clear sense of purpose and audience. Expression of ideas is generally developed and organized. These texts demonstrate an ability to synthesize concepts. The texts show the writer's ability to evaluate and use information. Writing style (word choice and sentence fluency) is effective for the purpose and audience. The writer is beginning to use discipline-specific writing conventions with uneven success. While there may be some errors in grammar, usage, and mechanics, a competency in English language usage is evident.

#### **Score 2: Nearing Proficiency**

The texts show some attention to purpose and audience. Expression of ideas may be vague, unclear, and/or unorganized at times. These texts demonstrate developing ability to synthesize concepts. The texts reveal the writer's uneven ability to use information; use of information may be insufficient. Writing style (word choice and sentence fluency) is sometimes ineffective for the purpose and audience. The writer shows minimal knowledge of discipline-specific writing conventions. A basic control of English language usage is apparent, even though frequent errors in grammar, usage, or mechanics may occasionally hinder understanding.

#### **Score 1: Novice**

The texts show little understanding of purpose and/or audience. Expression of ideas is confusing, minimal, or irrelevant; the organization is illogical or weak. These texts demonstrate difficulty in synthesizing concepts. The writer's use of information is inaccurate, inappropriate, or missing. Writing style (word choice and sentence fluency) is not effective for the purpose and audience. The writer shows little to no awareness of discipline-specific writing conventions. Severe problems with grammar, usage, and mechanics show poor control of English language and impede understanding.