

CSCI 215e Social & Ethical Issues in Computer Science

Rubric: CSCI

Term: Autumn 2023

Number: 215e

Lecture: Online Format

Section: 51

Duration: August 28 – December 15, 2023

CRN: 74708

Instructor Information

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Course Description

CSCI 215E explores ethical issues in the field of computing. Students will develop skills needed to identify and analyze various ethical concerns. The course covers standard ethical concepts and theories as well as methods of ethical analysis. There is a strong emphasis on practical application of the ethical process.

CSCI 215E additionally satisfies requirements for an Intermediate Writing course. [Please refer to this link \(https://www.umt.edu/faculty-senate/procedures/ascrc-procedures-201/writing-course-guidelines-202.50.pdf\)](https://www.umt.edu/faculty-senate/procedures/ascrc-procedures-201/writing-course-guidelines-202.50.pdf) for details on this element of the course.

National Center of Academic Excellence (CAE) in Cyber Defense (CD) Knowledge Unit: Policy, Legal, Ethics, and Compliance Learning Outcomes: This course aligns with CORE Knowledge Units (KU) for the academic requirement of the CAE IA programs jointly sponsored by the National Security Agency (NSA) and other federal agencies.

- Students shall be able to list the applicable laws and policies related to cyber defense and describe the major components of each pertaining to the storage and transmission of data.
- Students shall be able to describe their responsibilities related to the handling of information about vulnerabilities.
- Students will be able to describe how the type of legal dispute (civil, criminal, private) affects the evidence used to resolve it.

Knowledge Unit	Learning Level	Activity
Computer Security Act	Intermediate	Unit 10 lecture notes, quiz
Sarbanes - Oxley	Intermediate	Unit 8 lecture notes and quiz
Gramm – Leach - Bliley	Intermediate	Quinn p. 306; Unit 9 lecture notes, quiz
COPPA	Intermediate	Quinn p. 283; Unit 6 lecture notes; quiz
HIPPA/ FERPA	Intermediate	Quinn p. 313; Unit 9 lecture notes; quiz
USA Patriot Act	Intermediate	Quinn p. 298; Unit 9 lecture notes; quiz
Americans with Disabilities Act, 508	Intermediate	Unit 11 lecture notes; quiz
State, US, International Standards and Jurisdictions	Intermediate	Quinn Ch 6; Unit 10 lecture notes; quiz
PCI DSS	Intermediate	Unit 8 lecture notes; quiz
BYOD issues	Intermediate	Unit 8 lecture notes; quiz

Course Outcomes

- Articulate both the positive and negative impacts of information technology on society
- Describe articulate ethical theories and logic and apply both to ethical dilemmas presented by information technology
- Identify appropriate standards of professional conduct, relationships, and accountability
- Discuss differences and similarities between personal, professional, and institutional conduct and accountability

- Analyze the complexities of online behavior, networked communications, and human/technology interactions
- Evaluate the complexity of issues related to security, surveillance, and informational privacy including personal and professional best practices
- Compare and contrast the basis of intellectual property, ownership, and sharing in the information age
- Describe the similarities and differences between law and ethics and gain knowledge of laws and regulation relevant to information technology
- Apply ethical standards to of interpersonal communication (both verbal and written), knowledge- sharing, and debate
- Compose written documents that are appropriate for a given audience or purpose.
- Formulate and express opinions and ideas in writing.
- Use writing to learn and synthesize new concepts.
- Revise written work based on constructive feedback.
- Find, evaluate, and use information effectively.
- Begin to use discipline-specific writing conventions.
- Demonstrate appropriate English language usage.

Topics Covered:

Week/Unit	Topics	KU Topics	Assess
Week 1 Elements of Writing	•		Quiz 1 Reflection Paper 1: Social Isolation
Week 2 Catalysts for Change	<ul style="list-style-type: none"> • Introductions • Milestones in Computing • Milestones in Networking • Milestones in Data Storage 		Quiz 2 Reflection Paper 2: International Transactions and Local Regulations
Week 3 Automation and Globalization	<ul style="list-style-type: none"> • Automation and Employment • Globalization 		Quiz 3 Reflection Paper 3: Censorship
Week 4 Ethical Theories I	<ul style="list-style-type: none"> • Relativism (Subjective, Cultural, Egoism) • Absolutism (Kantianism, Act- and Rule-based Utilitarianism) 		Quiz 4 Reflection Paper 4
Week 5 Ethical Theories II	<ul style="list-style-type: none"> • Virtue Ethics, Social Contract • Federal Laws and Regulations 		Quiz 5 Reflection Paper 5

Week 6 Intellectual Property	<ul style="list-style-type: none"> • Trade Secrets • Trademarks • Patents • Copyrights 		Quiz 6 Reflection Paper 6
Week 7 Networked Communications	<ul style="list-style-type: none"> • History of the Internet • Social Media • Freedom of Expression • Children and Inappropriate Content 		Quiz 7 Reflection Paper 7
Week 8 Computer and Network Security	<ul style="list-style-type: none"> • Hacking • Malware • Cyber Crime 	<ul style="list-style-type: none"> • BYOD • PCI DSS • Sarbanes-Oxley 	Quiz 8 Reflection Paper 8
Week 9 Information Privacy	<ul style="list-style-type: none"> • Information Disclosure • Data Mining 	<ul style="list-style-type: none"> • Gramm-Leach-Bliley 	Quiz 9 Reflection Paper 9
Week 10 Privacy and the Government	<ul style="list-style-type: none"> • Information Collection by the Government • Covert Surveillance/Wiretapping • Data Collection/Data Mining • Information Dissemination 	<ul style="list-style-type: none"> • Computer Security Act • State, US, International Standards and Jurisdictions • COPPA • USA PATRIOT Act • HIPPA/FERPA 	Quiz 10 Reflection Paper 10
Week 11 Computer Reliability	<ul style="list-style-type: none"> • Data Errors • Software Errors • Autopilot Technology • Liability 	<ul style="list-style-type: none"> • Americans with Disabilities Act 	Quiz 11 Analysis Paper Section 1
Week 12 Personal and Professional Ethics	<ul style="list-style-type: none"> • Avoiding Biases and Fallacies • Personal vs. Professional Ethics • Rights and Responsibilities • Professional Codes of Conduct 		Quiz 12 Analysis Paper Section 2
Week 13 Work and Wealth	<ul style="list-style-type: none"> • Automation and Employment • Globalization • The Digital Divide 		Quiz 13 Analysis Paper Section 3
Week 14 Cybersecurity as a Profession	<ul style="list-style-type: none"> • 		Quiz 14 Analysis Paper Section 4
Week 15	<ul style="list-style-type: none"> • 		Quiz 15

Cybersecurity Educational Pathways			Analysis Paper Final
Week 16 Finals	•		Final Exam

Resources

I use *Ethics for the Information Age* by Michael Quinn as the primary text in this course. While the 8th edition is the most current, editions 6-8 will provide the relevant background material to complete the coursework. There are many sources for online and physical access to the text, including semester-long rental and acquiring a used copy of the 6th or 7th edition.

Quinn, M. J. (2020). *Ethics for the information age*. Pearson. ISBN: 9780135217979

All additional readings will be linked or made available on Moodle.

Grading:

Reflection Papers

(25%): Over the course of the semester, you will be required to write a series (10 total) of reflection papers, which are expected to be at least 300 words in length each. Reflection papers will be based on prompts drawn from readings and topics discussed in class and will give you the opportunity to interact with important course themes on a deeper level. Reflection paper grading assessment rubric is available on the Moodle course page under the course information section and detailed instructions for each reflection paper will be located in the description for specific assignments. Please see the course outline at the bottom of this document for the due dates of reflection papers. You are encouraged to revise and resubmit reflection papers based on instructor feedback – if you choose to so, revisions are due the Friday following the original due date. Revised documents should be uploaded on Moodle and revisions should be highlighted or tracked.

Reflection papers are due by 11:55 p.m. on Friday. Revisions to reflection papers are due by 11:55 p.m. on Friday of the following week.

Analysis Paper

(35%): In addition to write one Analysis Paper of at least 2500 words. This paper provides the opportunity to examine an ethical dilemma in greater depth and detail. Topics for the Analysis Paper will be chosen by students and must be based upon readings and topics discussed in class. An assessment rubric which further describes requirements for Analysis Paper will be provided along with the assignment instructions. A copy of the Program-level Writing Assessment Holistic Rubric for UM is available under the course information section of the course Moodle page.

To facilitate timely completion and ample time for revision and improvement, the Analysis Paper will be divided into five separate sections, due at intervals throughout the semester. Each

component of the paper will be submitted separately and will receive a round of feedback from the instructor. Students are required to revise these assignments according to instructor comments and compile the assignments into a cohesive final version that is due the last day of class.

All manuscripts must demonstrate writing competency at the proficient or advanced level. Papers not meeting this criterion are required to be rewritten. Please see the course outline at the bottom of this document for the due dates of analysis paper assignments.

Analysis paper assignments are due by 11:55 p.m. on Friday. Revisions to analysis paper assignments are due by 11:55 p.m. on Friday of the following week.

Quizzes

(25%): Quizzes will be completed to assess comprehension of reading content. **All quizzes must be completed by Friday at 11:55 pm of the week they are due.**

Final Exam

(15%): A comprehensive exam will be completed to assess course content at the end of the semester. Questions will be similar to those in the weekly unit quizzes.

Late Work Policy

Late work is not accepted. That being said, I understand that situations arise when students are unable to complete assignments by the stated deadline. My grading calculations drop the lowest quiz and reflection paper scores during the semester, essentially giving you one 'free' assignment in each of those categories.

All elements of the Analysis Paper, including the combined version, must be submitted by the stated due date.

Grading Scale

Grade	Points	How this applies to assignments
A, A-	90-100	Exceeds Standard: The student has gone above and beyond the assignment requirements and has also done an excellent job mentioning and applying concepts found in the course materials to the assignment.
B+, B, B-	80-89	Meets Standard: The student has met the assignment requirements and has made some attempt to apply concepts found in the course materials to the assignment.
C+, C, C-	70-79	Approaching Standard: The student has met some of the assignment requirements and has made some attempt to apply concepts found in the course materials to the assignment.
D+, D, D-	60-69	Needs Work: The student has failed to meet many of the assignment requirements and has not applied the concepts found in the course materials to the assignment.
F	<59	Incomplete: The student has failed to meet any of the assignment requirements and has significant errors in submitted work.

Course Accommodations Statement

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the Office for Disability Equity (ODE). If you anticipate or experience barriers based on disability, please contact the ODE at: (406) 243-2243, ode@umontana.edu, or visit www.umt.edu/disability for more information. Retroactive accommodation requests will not be honored, so please, do not delay. As your instructor, I will work with you and the ODE to implement an effective accommodation, and you are welcome to contact me privately if you wish.

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. http://www.umt.edu/vpsa/policies/student_conduct.php
- Plagiarism, cheating, or direct use of online resources without proper attribution will result in a deduction of points no less than 20% of the total points for the assignment to a zero on the assignment at the instructor's discretion.
- All students are expected to respect the opinions and dignity of all members of the class and act in a professional manner.

Artificial Intelligence

The use of artificial intelligence (AI) for this course is not permitted. **If a student is found to have used AI-generated content for an assignment, that student may fail the assignment or the course.**

Collaboration

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.

Collaboration on exams is strictly forbidden.

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.