
EDG 4433: History and Social Issues in Computing for K-12 Teachers.**3 Credits****COURSE SYLLABUS**

Semester: Fall 2026

Course Type: 100% Full Distance Learning

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I. Welcome!

This course explores the human side of computing, providing a crucial context for the technology we use every day. We will journey through the historical milestones of computer technology, examining the brilliant contributions and inventions that shaped the digital world. Beyond the technical, we will grapple with the critical social, legal, and ethical issues that arise in our interconnected society. You will learn about intellectual property, the responsibilities of digital citizenship, and the importance of cybersecurity awareness. By the end of this course, you will be equipped not only with historical knowledge but also with the frameworks needed to guide your students in becoming safe, ethical, and responsible participants in the digital world.

II. University Course Description

This course explores the historical development of computer technology and critical social issues in computing. Students learn about intellectual property, historical milestones and contributors, digital citizenship responsibilities, cybersecurity threats including malware and social engineering, security countermeasures, and the CIA Triad (confidentiality, integrity, availability) for information security.

III. Course Prerequisites

None

IV. Course Purpose

This course serves as a foundational introduction to the history and social dimensions of computing. In an era defined by digital interaction, it is essential for educators to understand the origins of technology and its profound impact on society. This course equips K-12 teachers with the knowledge to discuss historical context, model ethical digital behavior, and address critical issues such as privacy, security, and intellectual property with their students. The course focuses on building a comprehensive understanding that is essential for fostering responsible digital citizenship in the classroom.

V. Course Format

This fully online course is structured through weekly modules that combine asynchronous recorded lectures with hands-on technical demonstrations and projects. Students engage through discussion boards for peer interaction and complete practical assignments applying AI tools to educational scenarios. The course offers flexibility through asynchronous learning while maintaining support through individual consultation sessions with the instructor as needed.

VI. Student Learning Outcomes

Upon completion of this course, students will be able to:

- Identify examples of appropriate use and misuse of intellectual property.
- Identify milestones in the historical development of computer technology and important contributions of individuals or groups.
- Analyze cultural, legal, and ethical issues and responsibilities of digital citizens, organizations, and government entities.
- Analyze issues related to malicious software, social engineering, and security awareness.
- Identify concepts and terminology related to security countermeasures that prevent, detect, and correct breaches.
- Analyze security issues related to maintaining the confidentiality, integrity, and availability of information.

VII. Course Objectives

Students will:

- Differentiate between various software licenses (commercial, shareware, freeware, public domain) and apply copyright principles to classroom scenarios.
- Create a timeline of major events in computer history and articulate the significance of key inventors and their contributions.
- Evaluate real-world case studies of digital issues (e.g., privacy, data protection, cyberbullying) and propose reasoned, ethical responses.
- Classify different types of malicious software and social engineering attacks and develop a personal or classroom security awareness plan.
- Recommend appropriate security countermeasures (e.g., firewalls, antivirus, encryption) to address specific security vulnerabilities.
- Apply the CIA Triad (Confidentiality, Integrity, Availability) to analyze security breaches and propose strategies to mitigate them.

VIII. Required Texts and/or Readings and Course Materials

- There are no required text in this course. All of the course materials (videos, readings etc. will be available on the course website with free access. A computer with internet access and capable of running AI applications is required for this course.

IX. Supplementary (Optional) Texts and Materials

NA

X. How to Succeed in this Course

To succeed in this course, students should establish strong study habits from the beginning. This includes completing all weekly readings prior to attempting practical exercises and actively engaging with technical demonstrations. Time management is crucial - start assignments well

before deadlines to allow for troubleshooting and maintain detailed documentation of your technical implementation process. Regular engagement with course materials, peers, and AI tools is essential for building practical skills. Finally, always maintain backup copies of all project work to prevent any potential data loss during technical exercises.

XI. Academic Continuity

As this course is already fully online, any disruptions due to emergencies or severe weather will have minimal impact on course delivery. All course materials, including recorded lectures, assignments, and resources, will remain accessible through Canvas. If USF systems are impacted, backup copies of essential materials will be made available through Microsoft Teams. The instructor will communicate any changes or contingency plans through Canvas announcements and email. While most activities are asynchronous, any scheduled synchronous sessions (like individual consultations) will be rescheduled if disrupted, with alternative times communicated through Canvas.

XII. Communication

Primary communication for this course will be through Canvas messaging and announcements. For urgent matters, you may contact your instructor with the email provided on top. Your instructor typically responds to messages within 24 hours during weekdays and 48 hours on weekends. Virtual office hours are available by appointment through Microsoft Teams. Professional communication etiquette is expected in all interactions - please include your name and course number in email subjects.

XIII. Grading Scale

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|-------------------|---|
| Grading Scale (%) | |
| 90-100 | A |
| 80 - 89 | B |
| 70 - 79 | C |
| 60 - 69 | D |
| 0 - 59 | F |

XIV. Grade Categories and Weights

The final grade is directly tied to the mastery of each sub-competency. Each assignment will be graded using a specialized rubric designed to assess mastery of its corresponding sub-competency.

| Sub-Competency | Assessments | Weight of final Grade |
|--|--|-----------------------|
| 6.1: Identify examples of appropriate use and misuse of intellectual property. | Discussion 6.1: Software in the Classroom, Quiz 6.1: Intellectual Property and Licensing | 15% |
| 6.2: Identify milestones in the historical development of computer technology and important contributions.. | Discussion 6.2: Unsung Heroes of Tech, Historical Timeline Project 6.2 | 20% |
| 6.3: Analyze cultural, legal, and ethical issues and | Discussion 6.3: A Digital Citizenship Dilemma, Digital | 20% |

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| responsibilities of digital citizens. | Citizenship Case Study Analysis 6.3 | |
| 6.4: Analyze issues related to malicious software, social engineering, and security awareness. | Discussion 6.4: Phishing for Students, Quiz 6.4: Malware and Social Engineering | 15% |
| 6.5: Identify concepts and terminology related to security countermeasures. | Discussion 6.5: Building a Defense, Security Countermeasures Checklist 6.5 | 15% |
| 6.6: Analyze security issues related to maintaining the confidentiality, integrity, and availability of information. | Discussion 6.6: The CIA Triad in Schools, Quiz 6.6: The CIA Triad | 10% |
| Course Participation | Consistent engagement in weekly modules and discussions | 5% |
| TOTAL | | 100% |

XV. Instructor Feedback Policy & Grade Dissemination

Course modules open every Monday at 12:00 AM and close Sunday at 11:59 PM EST. All assignments must be submitted within this one-week window; late submissions are not accepted given the full week provided for completion. Individual feedback and grades will be posted in Canvas by Wednesday 5:00 PM of the following week. Major assignments like projects and the final portfolio may require additional grading time, which will be communicated in advance. All grades and feedback can be accessed through the Canvas gradebook.

XVI. Course Schedule.

| Week | Topics & Subitems | Assessment/Assignment |
|------|---|--|
| 1 | Intellectual Property Foundations (Sub-competency 6.1): (1) What is Intellectual Property? (2) The EDUCOM Code (3) Software Classifications: Commercial, Shareware (4) Ethical and Legal Use | Discussion 6.1: Software in the Classroom Describe a common situation in a school where intellectual property might be misused (e.g., copying software, using unlicensed images). Propose a solution that respects copyright and models ethical behavior for students. |
| 2 | Software Licensing and Ethics (Sub-competency 6.1): (1) Freeware and Public Domain (2) License Agreements and Terms of Use (3) Consequences of Piracy (4) Academic Integrity and Plagiarism | Quiz 6.1: Intellectual Property and Licensing Covers the different types of software licenses and the principles of appropriate and inappropriate use of intellectual property. |
| 3 | The Dawn of Computing (Sub-competency 6.2): (1) Early Calculators and Mechanical Computers (2) Charles Babbage & Ada Lovelace (3) Herman | Discussion 6.2: Unsung Heroes of Tech Research and post about a lesser-known contributor to computer science (not Jobs, Gates, |

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| | Hollerith and the Census (4) Alan Turing and the Theoretical Foundation | or Zuckerberg). Explain their contribution and why it was significant. |
| 4 | The Modern Computer Revolution (Sub-competency 6.2): (1) Vacuum Tubes to Transistors (2) The Integrated Circuit (Chip) (3) The Personal Computer Era (4) The Internet and the World Wide Web | Historical Timeline Project 6.2 Create an annotated timeline of the 10 most important milestones in computer history. For each milestone, include the date, a brief description, and its impact on society and education. |
| 5 | Digital Citizenship (Sub-competency 6.3): (1) Defining the Digital Citizen (2) Personal Responsibilities (3) Cyberbullying and Netiquette (4) Digital Footprints and Reputation | Discussion 6.3: A Digital Citizenship Dilemma Present a scenario where a student's online actions outside of school create a problem inside the classroom. Analyze the cultural, ethical, and legal dimensions of the situation and propose a response. |
| 6 | Privacy, Data, and Society (Sub-competency 6.3): (1) Data Tracking and Cookies (2) Identity Theft (3) Social Media and Privacy (4) Government's Role in Data Protection | Digital Citizenship Case Study Analysis 6.3 Analyze a real-world case study involving a privacy breach or a digital ethics issue. Write a report identifying the key issues, the stakeholders involved, and a set of recommendations for how a school might address a similar situation. |
| 7 | Threats to Security: Malware (Sub-competency 6.4): (1) Viruses, Worms, and Trojan Horses (2) Spyware and Adware (3) Rootkits (4) The History and Evolution of Malware | Discussion 6.4: Phishing for Students Find an example of a phishing email or a suspicious social media message. Deconstruct it for the class, explaining the red flags that indicate it is a social engineering attempt. |
| 8 | Threats to Security: Social Engineering (Sub-competency 6.4): (1) Principles of Social Engineering (2) Phishing, Vishing, Smishing (3) Security Awareness Best Practices (4) Creating a Culture of Vigilance | Quiz 6.4: Malware and Social Engineering Tests the ability to identify different types of malicious software and social engineering attacks, and understands principles of security awareness. |
| 9 | Security Defenses (Sub-competency 6.5): (1) Firewalls and Antivirus Software (2) Anti-Spyware and Filtering (3) The Importance of Updates and Patches (4) Complex Passwords and Password Managers | Discussion 6.5: Building a Defense Which single security countermeasure do you believe is most critical for teachers to understand and use? Justify your choice and explain how you would teach its importance to students. |
| 10 | Advanced Countermeasures (Sub-competency 6.5): (1) Two-Factor Authentication (2) Data Encryption (3) Network Security (4) Backups and Disaster Recovery | Security Countermeasures Checklist 6.5 Develop a simple, one-page "Digital Security Checklist" for educators. The checklist should outline essential practices and tools for preventing, detecting, and correcting security breaches on their classroom devices and accounts. |
| 11 | The CIA Triad: Confidentiality (Sub-competency 6.6): (1) Defining Confidentiality (2) Unauthorized | Discussion 6.6: The CIA Triad in Schools Consider a school's student information system (grades, attendance). Which element of the CIA |

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| | Access and Misuse (3) Encryption and Access Controls (4) Accidental Breaches | Triad is most crucial for this system? Justify your answer and describe a potential threat to that element. |
| 12 | The CIA Triad: Integrity and Availability (Sub-competency 6.6): (1) Defining Data Integrity (2) Ensuring Accuracy and Authenticity (3) Defining Availability (4) Denial of Service and Redundancy | Quiz 6.6: The CIA Triad Tests understanding of the confidentiality, integrity, and availability model and the ability to analyze security issues related to each component. |
| 13 | Integration & Application: (1) Case study analysis (2) Applying all competencies to a complex problem (3) Peer review of final portfolio components | Final Review Discussion Analyze a major real-world cyber incident (e.g., a large data breach, a disruptive ransomware attack). As a group, identify how issues from multiple competencies (IP, history, ethics, security) are interconnected in the event. |
| 14 | Synthesis & Portfolio Finalization: (1) Course synthesis (2) Portfolio assembly and review (3) Future application in K-12 settings | All Final Assignments Due Final, polished versions of all major assignments (6.2, 6.3, 6.5) must be submitted as a cumulative portfolio by the end of Week 14. |

* Note: The Schedule is subject to revision

XVII. General Education Statement (undergraduate only – Required if a Gen Ed course)

NA

XVIII. Integration of This Course into Your Academic Experience (Gen Ed courses only)

NA

XIX. Global Citizens Project (only required if a GCP course; must be verbatim)

NA

XX. USF Core Syllabus Policies

USF has a set of central policies related to student recording class sessions, academic integrity and grievances, student accessibility services, academic disruption, religious observances, academic continuity, food insecurity, pregnancy and related conditions, and sexual harassment that **apply to all courses at USF**. Be sure to review these online: usf.edu/provost/faculty-success/resources-policies-forms/core-syllabus-policy-statements.aspx

XXI. Course Policies: Grades

Late Work Policy: Offer specifics about your policy on late work.

Each module provides a full 7-day window for completion, and no late submissions will be accepted after the weekly deadline. To ensure success in this course, it is strongly recommended to begin each module on Monday rather than waiting until the weekend. Starting early allows time to troubleshoot technical issues, engage meaningfully in discussions, and seek clarification if needed. Students who consistently complete work early in the module week typically perform better and experience less stress than those who leave work until the last minute.

Medical Excuses:

If illness prevents coursework completion, students must immediately notify the instructor and submit medical documentation. While this is an online course with no physical attendance requirements, prompt communication regarding any medical issues impacting your ability to complete coursework is essential for arranging accommodations.

Grades of "Incomplete":

For graduate courses: An Incomplete grade ("I") is exceptional and granted at the instructor's discretion only when students are unable to complete course requirements due to illness or other circumstances beyond their control. The course instructor and student must complete and sign the "I" Grade Contract Form that describes the work to be completed, the date it is due, and the grade the student would earn factoring in a zero for all incomplete assignments. The due date can be negotiated and extended by student/instructor as long as it does not exceed two semesters for undergraduate courses and one semester for graduate courses from the original date grades were due for that course. An "I" grade not cleared within the two semesters for undergraduate courses and one semester for graduate courses (including summer semester) will revert to the grade noted on the contract.

Attendance Policy:

For this online course, regular participation is measured through timely completion of weekly modules and engagement with course materials. Students are expected to log in to the course per week to review content, participate in discussions, and complete assignments.

Campus Free Expression:

It is fundamental to the University of South Florida's mission to support an environment where divergent ideas, theories, and philosophies can be openly exchanged and critically evaluated. Consistent with these principles, this course may involve discussion of ideas that you find uncomfortable, disagreeable, or even offensive. In the instructional setting, ideas are intended to be presented in an objective manner and not as an endorsement of what you should personally believe. "Objective" means that the idea(s) presented can be tested by critical peer review and rigorous debate, and that the idea(s) is supported by credible research. In this course you may be asked to engage with complex ideas and to demonstrate an understanding of the ideas. Understanding and engaging with an idea does not require you to believe it or to agree with it.

Final Examinations Policy:

No exam, non-applicable

XXII. Course Policies: Technology and Media (include sections as applicable to your course)**Canvas:**

This course is fully delivered through Canvas Learning Management System. Students must log in regularly to access course materials, assignments, and announcements. Weekly modules open Monday 12:00 AM and close Sunday 11:59 PM EST. All course communication, submission of assignments, and grade distribution will be conducted through Canvas. For technical support, contact USF IT at (813) 974-1222 or help@usf.edu.

XXIII. Course Policies: Student Expectations

Health and Wellness: Example statement supporting student health and wellbeing.

Your health is a priority at the University of South Florida. We encourage members of our community to look out for each other and to reach out for help if someone is in need. If you or someone you know is in distress, please make a referral at www.usf.edu/sos so that the Student Outreach & Support can contact and provide helpful resources to the student in distress. A 24-hour licensed mental healthcare professional, offered through the counseling center, is available by phone at 813-974-2831, option 3. Please remember that asking for help is a sign of strength. In case of emergency, please dial 9-1-1.

Title IX Policy: It is recommended you include the paragraph below verbatim.

Title IX provides federal protections for discrimination based on sex, which includes discrimination based on pregnancy, sexual harassment, and interpersonal violence. In an effort to provide support and equal access, **USF has designated all faculty (TA, Adjunct, etc.) as Responsible Employees, who are required to report any disclosures of sexual harassment, sexual violence, relationship violence or stalking.** The Title IX Office makes every effort, when safe to do so, to reach out and provide resources and accommodations, and to discuss possible options for resolution. Anyone wishing to make a Title IX report or seeking accommodations may do so online, in person, via phone, or email to the Title IX Office. For information about Title IX or for a full list of resources please visit: <https://www.usf.edu/title-ix/gethelp/resources.aspx>. *If you are unsure what to do, please contact Victim Advocacy – a confidential resource that can review all your options – at 813-974-5756 or va@admin.usf.edu.*

Generative AI: With advancements in AI, tools like GPT-4 can generate human-like text, raising potential issues related to academic integrity and the authenticity of student work. Hence, it's essential to establish clear policies that are communicated to students from the outset of a course. CITL has developed some recommendations that you may consider using in your syllabus here: [CITL Generative AI Syllabus Course Policy Recommendations](#)

Course Hero / Chegg Policy: Offer specifics about your policy on contract cheating, paper mills, or the use of websites that enable cheating.

Example: The [USF Policy on Academic Integrity](#) specifies that students may not use websites that enable cheating, such as by uploading or downloading material for this purpose. This does apply specifically to Chegg.com and CourseHero.com – almost any use of these websites (including uploading proprietary materials) constitutes a violation of the academic integrity policy.

Professionalism Policy:

All course interactions must maintain professional etiquette. Students will communicate respectfully in discussion boards, emails, and group work. Written communications must be clear, appropriate, and maintain a professional tone. Disruptive behavior in online interactions may affect your final grade. For group activities, timely responses and meaningful contributions are required.

Netiquette Guidelines

Professional communication is essential in our online learning environment. When participating in course activities, maintain the same respect and courtesy as in face-to-face interactions. Consider

diverse perspectives and remember that written communication lacks verbal cues. Keep messages clear, focused, and constructive. Always proofread for clarity, avoiding all caps and informal language. Complete thoughts on one topic before introducing new ones. Avoid sarcasm and humor that could be misinterpreted. Following these guidelines in Canvas will create a positive learning environment.

End of Semester Student Evaluations:

All classes at USF make use of an online system for students to provide feedback to the University regarding the course. These surveys will be made available at the end of the semester, and the University will notify you by email when the response window opens. Your participation is highly encouraged and valued.

XXIV. Learning Support and Campus Offices

Academic Accommodations

Students with disabilities are responsible for registering with Student Accessibility Services (SAS) in order to receive academic accommodations. For additional information about academic accommodations and resources, you can visit the SAS website.

[SAS website for the Tampa and Sarasota-Manatee campuses.](#)

[SAS website for the St. Pete campus.](#)

Academic Support Services

The USF Office of Student Success coordinates and promotes university-wide efforts to enhance undergraduate and graduate student success. For a comprehensive list of academic support services available to all USF students, please visit the [Office of Student Success website](#).

Canvas Technical Support

Include information where students can find technical support.

Example: If you have technical difficulties in Canvas, you can find access to the Canvas guides and video resources in the “Canvas Help” page on the homepage of your Canvas course. You can also contact the help desk by calling 813-974-1222 in Tampa or emailing help@usf.edu.

[IT website for the Tampa campus.](#)

[IT website for the St. Pete campus.](#)

[IT website for the Sarasota-Manatee campus.](#)

Center for Victim Advocacy

Example: The [Center for Victim Advocacy](#) empowers survivors of crime, violence, or abuse by promoting the restoration of decision making, by advocating for their rights, and by offering support and resources. Contact information is available online.

Counseling Center

Example: The Counseling Center promotes the wellbeing of the campus community by providing culturally sensitive counseling, consultation, prevention, and training that enhances student academic and personal success. Contact information is available online.

[Counseling Center website for the Tampa campus.](#)

[Counseling Center website for the St. Pete campus.](#)

[Counseling Center website for the Sarasota-Manatee campus.](#)

Tutoring

Example: The Tutoring Hub offers free tutoring in several subjects to USF undergraduates. Appointments are recommended, but not required. For more information, email asctampa@usf.edu.

[Tutoring website for the Tampa campus.](#)

[Tutoring website for the St. Pete campus.](#)

[Tutoring website for the Sarasota-Manatee campus.](#)

Writing Studio

Example: The Writing Studio is a free resource for USF undergraduate and graduate students. At the Writing Studio, a trained writing consultant will work individually with you, at any point in the writing process from brainstorming to editing. Appointments are recommended, but not required. For more information or to make an appointment, email: writingstudio@usf.edu.

[Writing studio website for the Tampa campus.](#)

[Writing studio website for the St. Pete campus.](#)

[Writing studio website for the Sarasota-Manatee campus.](#)

XXV.Important Dates to Remember

All dates, assignments, and course content are tentative and subject to change at the instructor's discretion. Note: While modules follow a weekly schedule, changes will be announced through Canvas at least one week in advance

For official USF academic deadlines and holidays, refer to the Academic Calendar at <http://www.usf.edu/registrar/calendars/>