



El Camino College
COURSE OUTLINE OF RECORD – Official

Subject:	CIS
Course Number:	182
Descriptive Title:	Artificial Intelligence and Ethics
Division:	Business
Department:	Computer Information Systems
Course Disciplines:	Computer Information Systems
Catalog Description:	This course introduces students to ethical frameworks and critical thinking skills applied to the development and use of artificial intelligence and emerging technologies. Students explore issues such as algorithmic bias, data privacy, automation and employment, surveillance, autonomous systems, and policy governance. Emphasis is placed on ethical decision-making in AI design and implementation within industry, government, and cybersecurity contexts. Students evaluate case studies and construct ethical arguments relevant to AI applications.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	2
Hours Laboratory (per week):	3
Outside Study Hours:	4
Total Course Hours:	90
Course Units:	3
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	
Transfer UC:	Yes
Effective Date:	
General Education ECC:	
Term:	
Other:	
CSU GE:	
Term:	
Other:	
IGETC:	
Term:	

Other:	
CalGETC:	
Term:	
Other:	
Student Learning Outcomes:	At the end of this course, students will be able to: 1. Identify major ethical theories and apply them to AI policy and decision-making. 2. Evaluate the ethical and social implications of AI technologies including bias, privacy, and automation. 3. Construct and defend ethical arguments related to AI development and implementation. 4. Analyze the role of government and industry in ensuring responsible AI use.
Course Objectives:	1. Explain core ethical frameworks (utilitarianism, deontology, virtue ethics) as they apply to AI. 2. Analyze ethical dilemmas in algorithmic decision-making and data collection. 3. Assess impacts of AI on employment, privacy, and surveillance. 4. Debate policy and regulatory approaches to AI governance. 5. Communicate ethical positions effectively through discussion and written analysis.
Major Topics:	I. Introduction to Artificial Intelligence and Ethics (4 hours, lecture) A. Overview of artificial intelligence and its evolution B. AI in modern computing and cybersecurity C. The role of ethics in technology decision-making D. Course scope and expectations II. Moral Frameworks for AI Ethics (6 hours, lecture) A. Overview of ethical theories 1. Utilitarianism – the greatest good principle 2. Deontology – duty and universal moral law 3. Virtue Ethics – character and moral development B. Applying ethical frameworks to AI design and deployment C. Case studies: autonomous vehicles, healthcare AI, and public safety systems III. Critical Thinking and Ethical Reasoning (4 hours, lecture) A. Distinguishing between arguments, opinions, and assumptions B. Logical fallacies and cognitive bias in AI-related decision-making C. Evaluating arguments using validity, soundness, and coherence D. Applied reasoning: analyzing ethical dilemmas in AI case studies IV. Bias, Fairness, and Accountability in Algorithms (4 hours, lecture) A. Understanding algorithmic bias and discrimination B. Dataset diversity and representativeness C. Transparency and explainability in AI systems D. Mitigating bias through design and testing practices E. Case analysis: bias in facial recognition and hiring algorithms V. AI, Privacy, and Surveillance (4 hours, lecture) A. Data collection ethics and informed consent B. Surveillance capitalism and data monetization

- C. Government surveillance and civil liberties
 - D. Policy frameworks: GDPR, CCPA, and AI Bill of Rights
 - E. Ethical use of biometric and predictive data
- VI. Automation, Employment, and the Future of Work (4 hours, lecture)
- A. Workforce disruption and job displacement
 - B. AI-assisted decision-making in management and hiring
 - C. Economic and ethical implications of automation
 - D. Corporate social responsibility and retraining initiatives
- VII. AI Governance, Law, and Policy (6 hours, lecture)
- A. Overview of AI regulatory approaches
 - B. Role of industry standards (IEEE, ISO)
 - C. Governmental frameworks and international cooperation
 - D. Case study: liability in autonomous systems
 - E. The ethics of AI use in defense and national security
- VIII. Environmental and Global Implications (4 hours, lecture)
- A. Energy use and carbon footprint of large AI models
 - B. Sustainable computing and green AI practices
 - C. Global inequality and access to AI technologies
 - D. Environmental justice in the age of automation
- Laboratory Topics (54 hours, lab):
1. Ethical Case Analysis Workshop (6 hours)
 - A. Review recent AI ethics cases (facial recognition, self-driving vehicles, predictive policing)
 - B. Identify key stakeholders and ethical frameworks used in decision-making
 - C. Discuss the societal and legal implications of each case
 - D. Produce a short written summary analyzing the ethical conflict and outcome
 2. Data Bias and Fairness Investigation (6 hours)
 - A. Examine sample datasets for representational and sampling bias
 - B. Use online bias-testing tools to visualize disparities in AI outputs
 - C. Discuss how biased data leads to unfair decisions in real-world systems
 - D. Propose design improvements or policy mitigations to reduce bias
 3. Privacy and Surveillance Simulation (6 hours)
 - A. Demonstrate data collection and tracking using simulated online profiles
 - B. Map how cookies, facial recognition, and location data create digital footprints
 - C. Analyze ethical implications of surveillance capitalism and state surveillance
 - D. Draft short privacy-policy recommendations promoting transparency and user control
 4. AI in the Workplace Role-Play: Automation and Equity (6 hours)
 - A. Role-play organizational scenarios where AI replaces or augments human labor
 - B. Evaluate ethical dilemmas regarding fairness, accountability, and inclusion
 - C. Identify legal and economic considerations affecting the workforce
 - D. Present group findings with policy suggestions for responsible automation
 5. AI Policy Debate and Research Project (6 hours)
 - A. Research current AI legislation or policy proposals (e.g., EU AI Act, U.S. AI Bill of Rights)

	B. Form teams representing different stakeholders (government, tech firms, consumers) C. Conduct a structured classroom debate on regulation and innovation balance D. Submit a short policy brief summarizing arguments and recommendations 6. Global AI Ethics Forum (6 hours) A. Investigate ethical perspectives from multiple cultural or regional contexts B. Compare global approaches to data protection and algorithmic transparency C. Create collaborative presentations on international case studies (e.g., China’s Social Credit, EU GDPR) D. Reflect on how global diversity influences universal AI standards 7. Capstone Reflection Project: “My AI Ethics Manifesto” (6 hours) A. Synthesize insights from all course modules and labs B. Develop a personal or team “AI Ethics Manifesto” outlining professional principles C. Include reflection on personal biases, leadership responsibility, and ethical decision-making in tech careers D. Present and peer-review manifestos in class 8. Peer Review and Discussion Roundtable (6 hours) A. Evaluate classmates’ projects and provide constructive feedback B. Engage in guided dialogue on differing ethical perspectives C. Summarize lessons learned and connect them to real-world CIS applications 9. Final Integration Lab and Assessment (6 hours) A. Integrate course content into a final case simulation combining bias, privacy, and policy issues B. Collaboratively analyze an end-to-end AI lifecycle for ethical vulnerabilities C. Produce a final group report summarizing analysis, ethical framework applied, and recommendations for improvement
Total Lecture Hours:	36
Total Laboratory Hours:	54
Total Hours:	90
A.1. Primary Methods of Evaluation (Part 1 - CCN courses only):	
Primary Method of Evaluation:	2) Problem solving demonstrations (computational or non-computational)
Typical Assignment Using Primary Method of Evaluation:	Analyze a real-world AI ethics case (such as facial recognition or autonomous vehicles). Prepare a 3-page report identifying the ethical framework applied, stakeholder interests, and recommended policy actions.
Critical Thinking Assignment 1:	Example Critical Thinking Assignment Assignment Title: <i>Algorithmic Bias in Facial Recognition Technologies</i> Description: Students will analyze the ethical and societal implications of facial recognition technologies used in law enforcement and consumer applications. They will begin by reviewing recent case studies involving algorithmic bias and unequal accuracy rates across demographic groups. Using at least two ethical frameworks—such as utilitarianism and

	deontology—students will evaluate whether and how these systems should be deployed in public settings. Instructions: 1. Summarize the real-world case, identifying key stakeholders, decision-makers, and affected communities. 2. Apply two ethical frameworks to assess the actions taken by developers or organizations. 3. Analyze the potential consequences of continuing or restricting use of this technology. 4. Propose actionable recommendations for creating fairer, more transparent AI systems. 5. Support conclusions with evidence from course readings, professional standards (e.g., IEEE <i>Ethically Aligned Design</i>), and scholarly research. Deliverable: A 3- to 4-page analytical essay (or equivalent presentation) that demonstrates understanding of ethical frameworks, critical reasoning, and policy implications in AI. Evaluation Criteria: • Clear articulation of ethical issues and affected stakeholders • Application of multiple ethical theories to real-world AI challenges • Depth of reasoning and use of credible sources • Clarity, organization, and professionalism of written or presented work
Critical Thinking Assignment 2:	Example Critical Thinking Assignment Assignment Title: <i>Ethical Decision-Making in Autonomous Vehicles</i> Description: Students will examine ethical dilemmas faced by developers of autonomous (self-driving) vehicles when programming decision-making algorithms. The assignment challenges students to evaluate competing moral obligations—such as safety, liability, and fairness—through the lens of ethical theory and social responsibility. Instructions: 1. Research one documented incident or ethical scenario involving an autonomous vehicle accident or failure (e.g., the “trolley problem” dilemma, Tesla autopilot accidents, or similar cases). 2. Identify and describe the key ethical questions: Who is responsible—the manufacturer, the programmer, the AI system, or the user? 3. Apply at least two ethical frameworks (e.g., utilitarianism, deontology, or virtue ethics) to assess the decision-making process. 4. Evaluate how government policy, public trust, and transparency influence accountability in these situations. 5. Recommend potential ethical guidelines or system-design changes to prevent similar issues.

	Deliverable: A structured position paper (3–4 pages) or short recorded presentation analyzing the scenario, ethical frameworks, and recommended solutions. Evaluation Criteria: • Depth of ethical reasoning and clarity in identifying conflicting values • Application of multiple ethical theories to technical and societal contexts • Use of credible sources, legislation, and course materials • Originality and practicality of proposed ethical guidelines
Other Evaluation Methods:	Laboratory Reports, Presentation, Quizzes
If Other:	
Instructional Methods:	Demonstration, Discussion, Group Activities, Guest Speakers, Lecture
If other:	
Work Outside of Class:	Answer questions, Problem solving activity, Required reading, Skill practice, Study, Written work (such as essay/composition/report/analysis/research)
If Other:	
Up-To-Date Representative Texts:	Representative Text: Coeckelbergh, Mark. AI Ethics. MIT Press, 2020. Alternative Texts:
Alternative Texts:	-Dubber, Markus D., et al., eds. The Oxford Handbook of Ethics of AI. Oxford UP, 2020. -IEEE. Ethically Aligned Design, Version 2 (free download).
Required Supplementary Readings:	
Other Required Materials:	Access to digital library databases and online AI ethics resources.
Requisite	
Category	
Requisite course:	
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	
Requisite Skill:	
Requisite Skill and Matching skill(s): Bold the requisite skill(s). if applicable	
Requisite course:	
Requisite and Matching skill(s): Bold	

the requisite skill. List the corresponding course objective under each skill(s).	
Requisite Skill:	
Requisite Skill and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s). if applicable	
Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Richard Perkins
Date:	10/20/2025
Original Board Approval Date:	01/21/2026
Effective Term:	Fall 2026