Subject:	CIS
Course Number:	183
Descriptive Title:	Applied Artificial Intelligence (AI) in Business
Division:	Business
Department:	Computer Information Systems
Course Disciplines:	Computer Information Systems
Catalog Description:	This course illustrates how Artificial Intelligence (AI) is currently applied in industries and across business functions to support business strategy formulation, implementation, and evaluation. This course introduces the data-driven outcomes and ethical issues to be considered when implementing responsible AI in business and industry.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	CIS 13 or equivalent experience
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. Analyze business problems and recommend appropriate AI applications that support organizational strategy and decision-making. 2. Evaluate the ethical, societal, and equity implications of implementing AI technologies in business contexts. 3. Apply AI tools and platforms in business case studies and present data-driven findings through written reports or presentations.
Course Objectives:	1. Define and interpret key Artificial Intelligence (AI) concepts and terminology within business and organizational contexts. 2. Analyze how AI and human collaboration enhance decision-making, productivity, and organizational intelligence. 3. Evaluate how AI technologies support business strategy execution and contribute to competitive advantage across industries. 4. Assess the influence of laws, policies, and regulatory frameworks on the ethical and responsible adoption of AI in business. 5. Apply ethical reasoning to identify and resolve dilemmas related to bias, accountability, and fairness in AI-driven decision-making. 6. Critique the social, financial, and reputational impacts of AI implementation and governance within diverse business environments. 7. Compare AI applications across core business functions—human resources, marketing, finance, and operations—to determine best practices and risks. 8. Evaluate data-driven outcomes from AI initiatives to measure effectiveness, efficiency, and return on investment (ROI). 9. Formulate recommendations for integrating AI responsibly into existing business processes and for developing an AI-ready organizational culture. 10. Synthesize technical, ethical, and strategic considerations to justify or critique the adoption of AI solutions for real-world business problems.
Major Topics:	**Lecture Topics (36 Hours Total)** **I. Introduction to Artificial Intelligence in Business (4 hours)** A. Defining AI and related terminology B. Evolution of AI and trends in adoption C. AI's role in modern business strategy D. Collective intelligence: combining human and machine capabilities E. Case examples of AI in business applications F. Impacts on productivity, decision-making, and innovation **II. Ethical and Societal Issues in AI (5 hours)** A. Principles of responsible AI: fairness, reliability, transparency, privacy, accountability B. Human bias in AI design and deployment C. Costs and risks of AI adoption (financial, social, reputational) D. Case studies of AI misuse and ethical dilemmas **III. AI and Business Strategy Implementation (5 hours)** A. Frameworks for achieving competitive advantage with AI B. Data-driven decision making and measurable outcomes

C. Building an AI-ready organizational culture
D. Evaluating the success of AI initiatives

IV. AI in Human Resources Management (3 hours)
A. AI in recruitment and onboarding
B. Performance management and employee analytics
C. Workforce planning and diversity initiatives

V. AI in Marketing (3 hours)
A. Customer segmentation and predictive analytics
B. Personalized advertising and recommendation systems
C. Social media and sentiment analysis

VI. AI in Financial Management (3 hours)
A. AI in accounting, auditing, and compliance
B. Fraud detection and risk management
C. Predictive modeling in financial markets

VII. AI in Operations and Supply Chain (3 hours)
A. Process automation and efficiency improvements
B. Predictive maintenance and quality control
C. Supply chain optimization and logistics

VIII. AI Tools, Platforms, and Emerging Technologies (5 hours)
A. Overview of AI platforms (Azure AI, TensorFlow, Google Vertex AI)
B. AI in business intelligence and analytics
C. Generative AI in content creation and business workflows

IX. Capstone Project and Course Integration (5 hours)
A. Guidance on capstone expectations and structure
B. Integrating ethical, strategic, and operational perspectives
C. Presentation preparation and professional communication

Lab Topics (54 Hours Total)

I. AI Platform Orientation (5 hours)
A. Explore AI interfaces (Google AI, Azure AI, or equivalent)
B. Experiment with basic AI workflows and data inputs

II. Analyzing Bias in AI Datasets (5 hours)
A. Identify and test for bias in sample training data
B. Apply fairness and transparency metrics

III. Strategic Planning Simulation (6 hours)
A. Use AI-driven tools to model business decisions
B. Interpret data visualizations to inform strategy

	IV. AI Tools for Human Resources (5 hours) A. Use AI-based recruiting or scheduling software B. Analyze performance and workforce datasets **V. AI Tools for Marketing (5 hours)** A. Conduct customer segmentation using AI platforms B. Perform social sentiment analysis on marketing data **VI. AI Tools for Finance (5 hours)** A. Work with predictive financial models B. Conduct fraud detection exercises with sample data **VII. AI Tools for Operations and Supply Chain (5 hours)** A. Simulate process automation and logistics optimization B. Analyze predictive maintenance case data **VIII. Guided Projects – AI Tools & Platforms (8 hours)** A. Conduct applied exercises using AI frameworks B. Develop predictive analytics models and visualizations C. Explore generative AI for marketing or content tasks **IX. Capstone Project Labs (10 hours)** A. Research and analyze AI adoption in a chosen industry B. Compile findings into a written report and presentation C. Deliver and present Capstone Project to peers and instructor
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:	In this assignment, you will use artificial intelligence (AI) tools to analyze a real-world business problem and propose a practical, data-driven solution. You will be provided with a dataset and a business scenario from one of the following areas: marketing, finance, human resources, or operations. Examples include declining customer engagement, high employee turnover, rising fraud detection costs, or inefficient inventory management. Using this information, you will define the problem, apply an appropriate AI method such as predictive analytics or classification, and interpret the results to uncover insights. Based on your analysis, you will recommend an AI-enabled solution that could improve business performance or reduce costs. Your report should also explain why your solution is feasible and address any ethical or operational considerations. Submit a 3–5 page written report or slide presentation that summarizes your findings, includes screenshots or examples of your data analysis, and clearly explains your proposed solution. You will also share a short summary of your work during lab. Your grade will be based on the accuracy of your AI approach, the depth of your analysis, the clarity of your interpretation, your consideration of ethical issues, and the overall professionalism of your presentation.

Critical Thinking Assignment 1:	In this assignment, you will analyze a case study about a company that used an AI-powered hiring platform which unintentionally introduced bias into its candidate screening process. Your goal is to evaluate how ethical, social, and organizational factors affect the responsible use of AI in business decision-making. You will begin by identifying the main problem and the stakeholders impacted by the issue. Then, analyze the causes of bias by looking at the data used, the algorithm's design, and the company's decision-making workflow. Next, evaluate the company's response using the key principles of responsible AI — fairness, accountability, transparency, and inclusiveness. Finally, recommend actions the company could take to correct the problem while balancing business goals, ethical governance, and social responsibility. Support your recommendations with evidence from course readings, policies, or real-world industry examples. Submit a 3–5 page analytical report that summarizes your findings and recommendations. You may also include an optional presentation or infographic that highlights the ethical and operational impacts of your analysis. Your work will be assessed on your ability to identify ethical dilemmas, evaluate multiple perspectives, synthesize evidence into a clear and well-supported argument, and apply abstract ethical principles to real-world business challenges.
Critical Thinking Assignment 2:	In this assignment, you will apply AI concepts and strategic thinking to design a business improvement plan supported by data-driven insights. You will be given a dataset and background scenario—such as declining sales, inefficient logistics, or inconsistent customer satisfaction—and will use it to develop a viable AI-based strategy. Begin by assessing the business problem and identifying which functions are most affected. Propose a data-driven AI solution, such as predictive analytics, natural language processing, or automation, that addresses the issue. Explain why your chosen AI method or tool is the most appropriate by considering factors like feasibility, cost, and alignment with the company's goals. Next, identify possible ethical, operational, or cultural challenges the organization might face when implementing your solution. Finally, create a strategic roadmap outlining the key steps needed to integrate the AI solution into business operations effectively. Submit a formal 4–6 page proposal that includes your analysis, justification, and implementation plan. Include supporting visuals such as charts, model outputs, or workflow diagrams. You will also share a brief summary of your work during an in-class discussion or peer review session. Your work will be evaluated based on how well you apply strategic reasoning to a complex business problem, assess trade-offs among different solutions, integrate ethical and operational considerations, and communicate clear, professional recommendations supported by data.
Other Evaluation Methods:	Class Performance, Fieldwork, Laboratory Reports, Objective Exam, Presentation, Quizzes, Reading Reports, Term or Other Papers
If Other:	
Instructional Methods:	Demonstration, Discussion, Group Activities, Lab, Lecture, Multimedia presentations
If other:	
Work Outside of Class:	Problem solving activity, Required reading, Skill practice, Study, Written work (such as essay/composition/report/analysis/research)

If Other:	
Up-To-Date Representative Texts:	Elsen, Christoph, and Buchkremer, Rüdiger. *Applied Artificial Intelligence in Business.* Version 1.0. Springer Nature, 2024. https://link.springer.com/book/10.1007/978-3-031-05740-3. Licensed under Springer Nature Terms of Use (standard academic license)
Alternative Texts:	Wood, Roy. *Business Applications of Artificial Intelligence and Machine Learning.* Version 1.0. Oklahoma State Regents for Higher Education, 2024. https://open.ocolearnok.org/aibusinessapplications/. Licensed under CC BY-NC 4.0.
Required Supplementary Readings:	
Other Required Materials:	
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:	CIS 13
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	**Identify and analyze existing and emerging technologies and their impact on organizations and society including computer, communication and information systems, privacy, security, crime, ethics, global relationships, and career opportunities.** CIS 13 - Identify and analyze existing and emerging technologies and their impact on organizations and society including computer, communication and information systems, privacy, security, crime, ethics, global relationships, and career opportunities.
Requisite Skill:	or equivalent experience
Requisite Skill and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s). if applicable	**Students with equivalent experience should be able to identify and analyze existing and emerging technologies and their impact on organizations and society including computer, communication and information systems, privacy, security, crime, ethics, global relationships, and career opportunities.**
Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Hac Le

Date:	10/10/2025
Original Board Approval Date:	01/21/2026
Effective Term:	FA 2026