CAI-COMPUTING: ARTIFICIAL INTELLIGENCE

CAI 1000 Introduction to Artificial Intelligence (3 Credits)
This course surveys Artificial Intelligence (AI) techniques, theories, and applications, exposing students to AI project cycles and decision making. Students will be introduced to various social issues and concerns surrounding AI such as ethics and bias.

CAI 1020 Philosophy of Artificial Intelligence (3 Credits)
This course explores the fundamental ideas and reasoning behind artificial intelligence (AI) by examining the building blocks and components of AI, along with the problems it creates, solves, or alters. The course emphasizes the ethical, social, and cultural impact of AI, considering the issues raised by professionals, society, and institutions.

CAI 2100 Machine Learning Foundations (3 Credits)
This introductory course explores the fundamental concepts of machine learning. Discover how computers can analyze data and make predictions without explicit programming. Learn about supervised and unsupervised learning, along with practical applications like classification. The course also delves into Python programming basics used for building intelligent models.

CAI 2220 Introduction to Generative AI Prompt Engineering (3 Credits)
This course provides the student with a strong introduction to the core concepts and methodologies that apply to any Large Language Model (LLM), including but not limited to OpenAI ChatGPT, Google Gemini, and Microsoft Copilot. The students will develop and evaluate LLM prompts using advanced prompt techniques and current best practices.

CAI 2300 Introduction to Natural Language Processing (3 Credits)
This course delves into the fascinating world of Natural Language Processing (NLP) and text processing. Master the fundamentals of how computers interpret and manipulate human language. The course focuses on the knowledge and skills needed to develop language recognition applications, empowering the student to bridge the gap between humans and machines.

CAI 2800 Artificial Intelligence for Business Solutions (3 Credits)
This course explores how Artificial Intelligence (AI) and machine learning can revolutionize business solutions. Learn the foundational algorithms used to make data-driven predictions, like classifying customers or identifying trends. Discover how AI is transforming industries by optimizing customer service, boosting sales, and creating targeted marketing campaigns. Gain the knowledge to leverage AI and turn data into a powerful business advantage.

CAI 2840 Introduction to Computer Vision (3 Credits)
This course delves into the science and engineering behind enabling computers to "see" and understand the visual world. We'll explore how computers process, analyze, and interpret digital images and videos, unlocking valuable insights and applications across various fields. Topics include Convolutional Neural Networks (CNNs), the workhorses of modern computer vision, and Generative Adversarial Networks (GANs), AI systems that can not only analyze images but also generate entirely new, realistic ones.