Artificial Intelligence Courses

AI 500 - Foundations of Artificial Intelligence
Hours: 4
This course is a general introductory course designed to accommodate students with diverse majors. It serves as an entry point into the world of artificial intelligence (AI) by providing a strong foundation in essential science principles, including algorithms, data structures, and problem solving. Natural language processing is the other core field of AI, connecting human language generation and understanding as key intelligent behaviors. Throughout this course, students will apply various algorithms using fundamental data structures, such as lists, trees, and graphs to solve various AI problems. By the conclusion of this course, students will possess a robust knowledge base, equipping them to engage with AI in various contexts, from research to practical application. Embark on this intellectually stimulating journey to uncover the core principles driving the AI revolution, tailored to the diverse academic backgrounds of graduate students. Prerequisites: CSCI 513.

AI 510 - Seminar in Artificial Intelligence Ethics
Hours: 3
As artificial intelligence (AI) continues to transform various aspects of our lives, it becomes imperative to examine the ethical implications of its development, deployment, and impact on society. This course is a topical seminar is a topical seminar designed to engage students in critical discussions surrounding the ethical challenges and dilemmas posed by AI technologies. Topics may vary, but may include: bias and fairness; transparency and accountability; AI and social justice, legal implications, emerging technologies, case studies, privacy issues, ethical guidelines and policy development.

AI 520 - Machine Learning for Artificial Intelligence
Hours: 3
This course is a foundational course designed to introduce students into the interdisciplinary applications of Artificial Intelligence, focusing on the robust field of Machine Learning. The course will look at computer algorithms that automatically acquire new knowledge and improve their own performance through experience. This comprehensive, application-oriented course is the first step in the AI master's program, specially tailored to accommodate students from a variety of academic disciplines including computer vision, natural language processing, and decision making in healthcare and finance. Topics include linear and logistic regression, artificial neural networks, Bayesian networks and learning, decision trees, kernel / support-vector machines, statistical learning methods, unsupervised learning, reinforcement learning, and other currently emerging algorithms. Prerequisites: CSCI 513.